

## REPORT

T223 H2X HMAH

OF THE

1609

## COMMISSIONER OF PATENTS

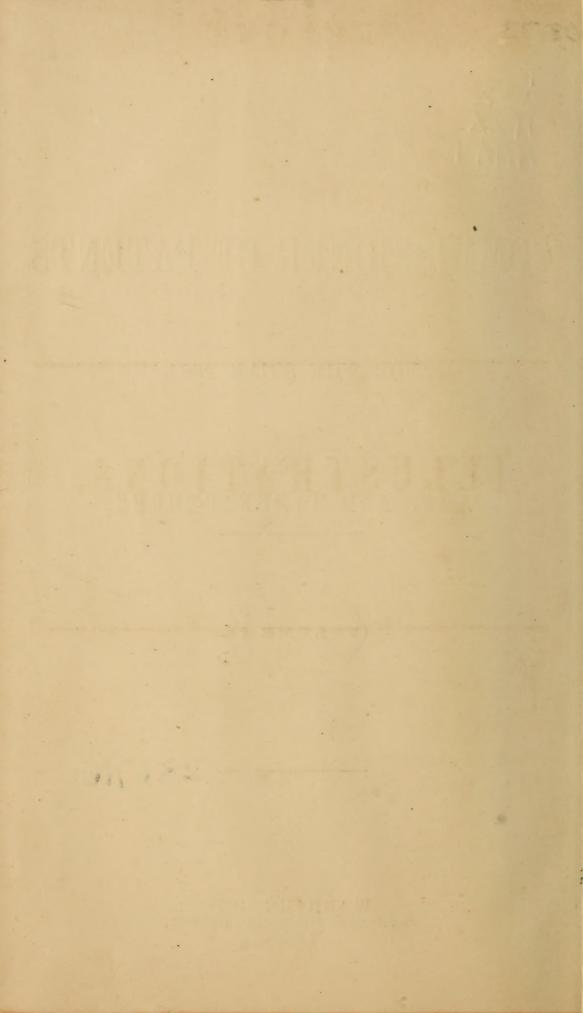
FOR THE YEAR 1864.

## ARTS AND MANUFACTURES.

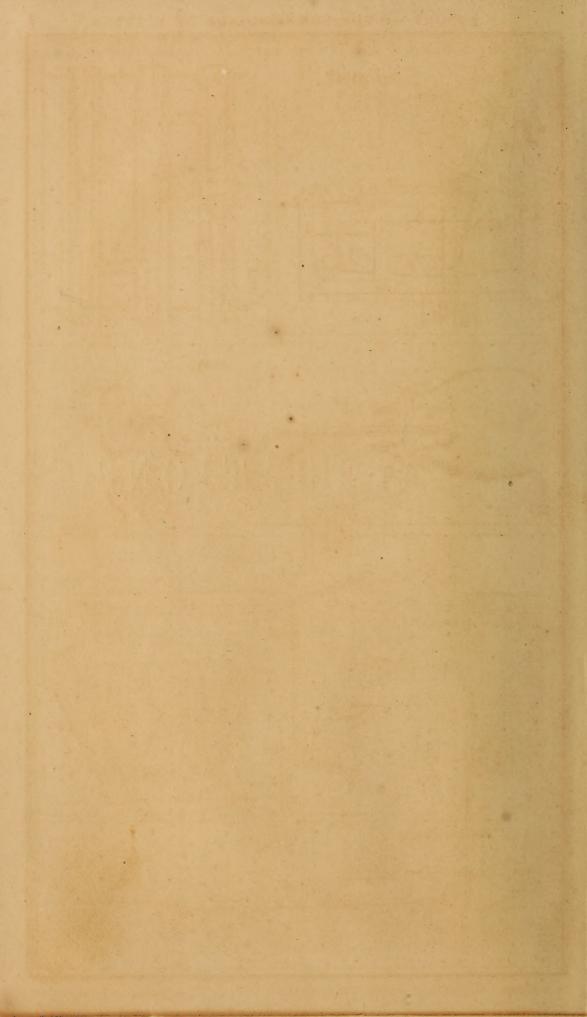
VOLUME II.

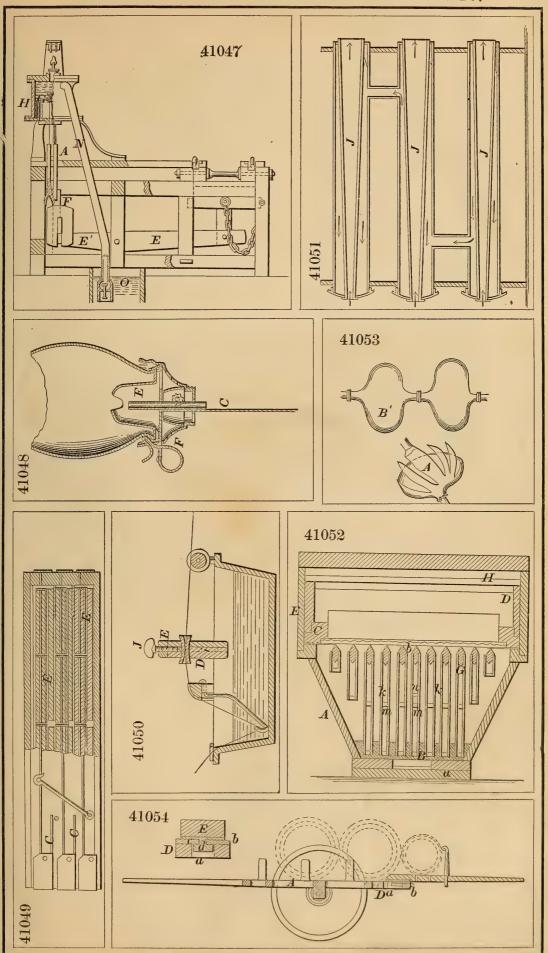


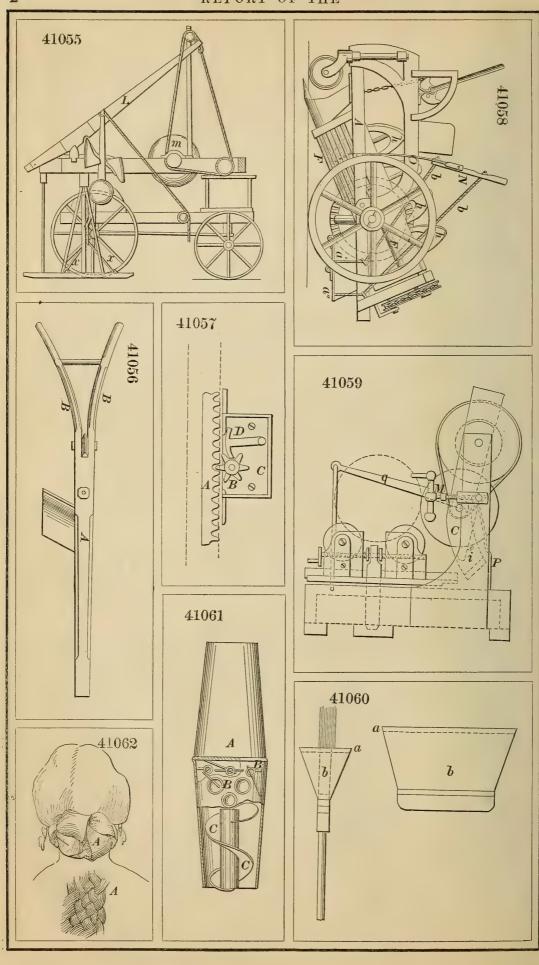
WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1866.

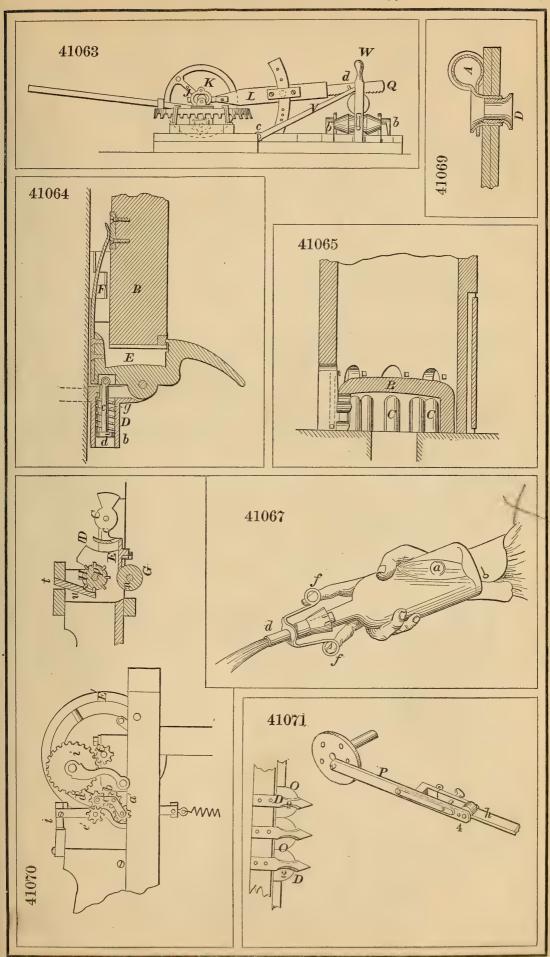


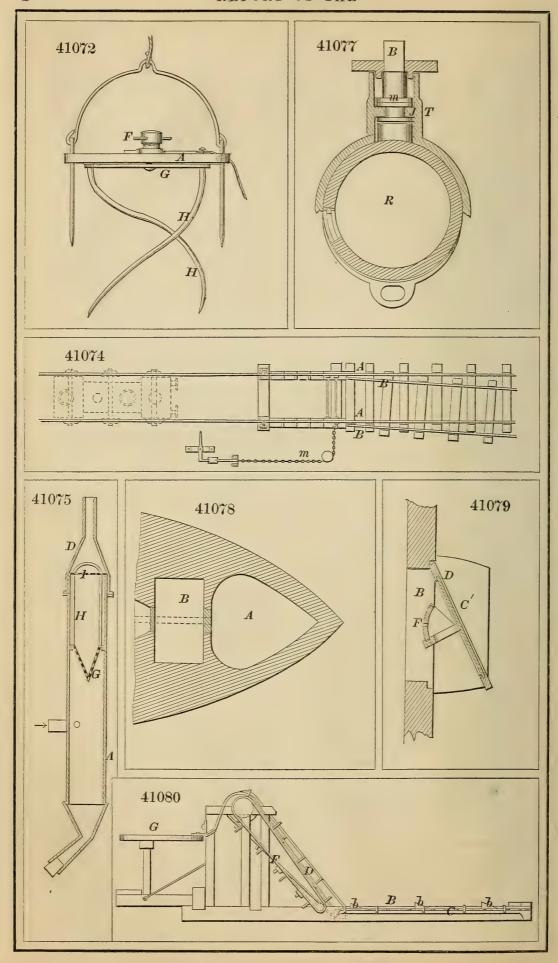
## ILLUSTRATIONS.

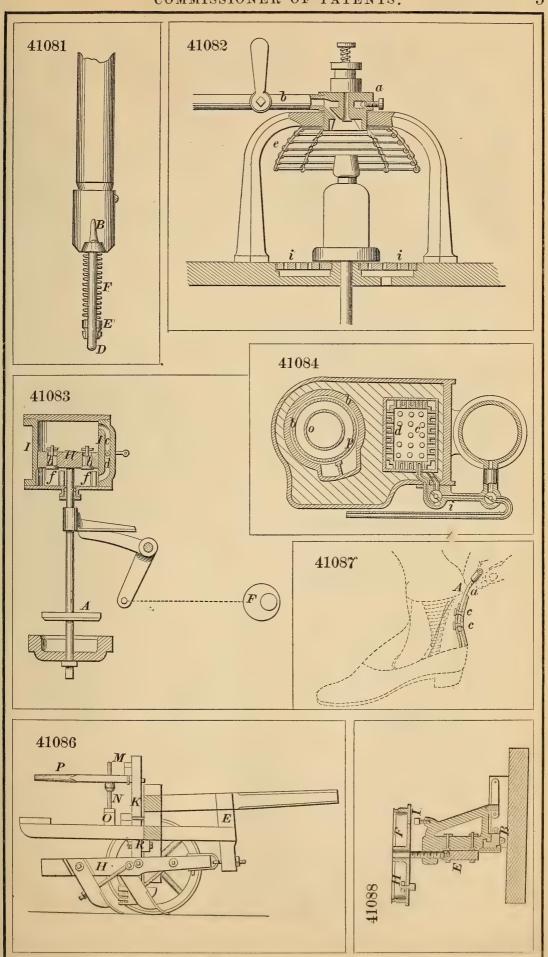


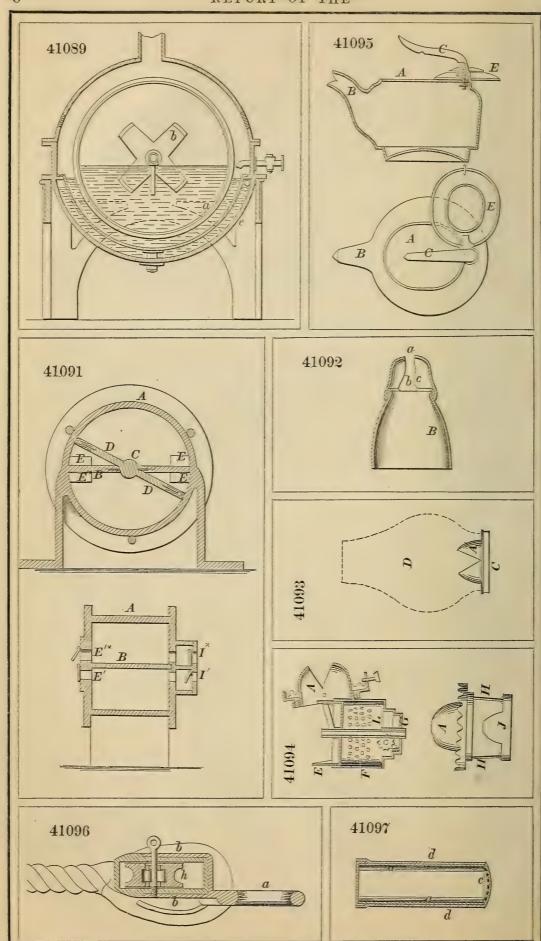


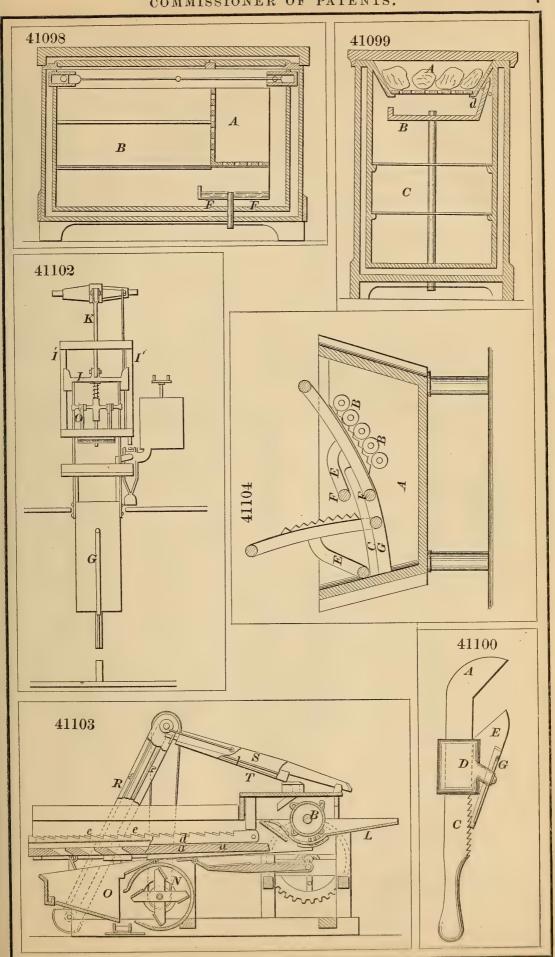


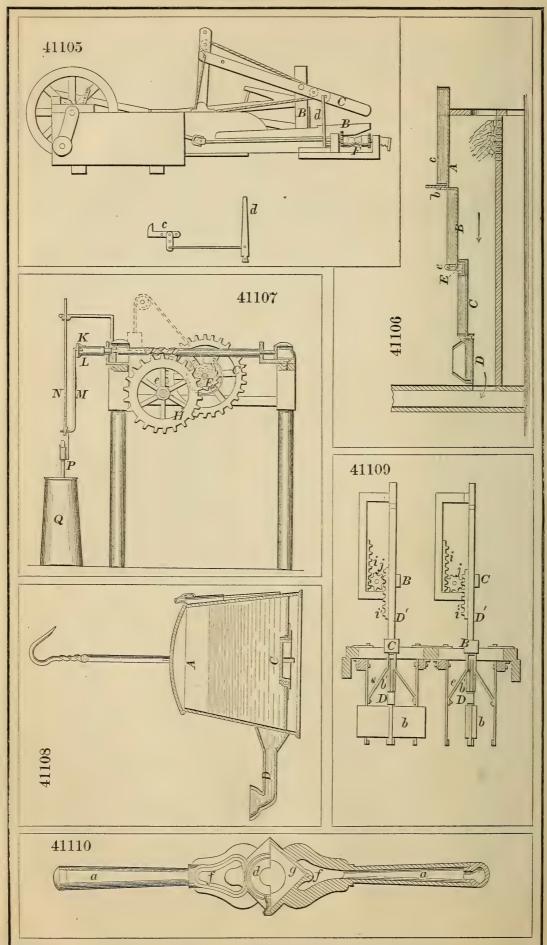


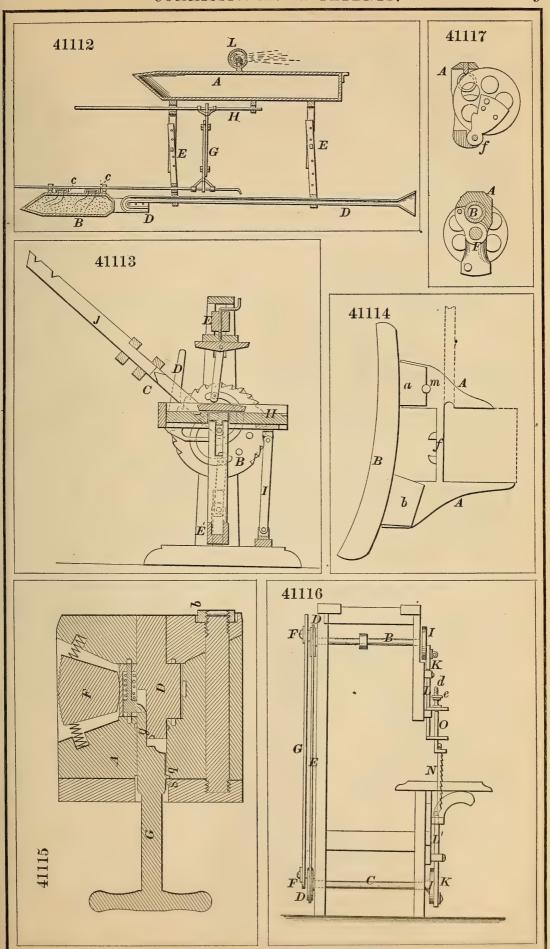




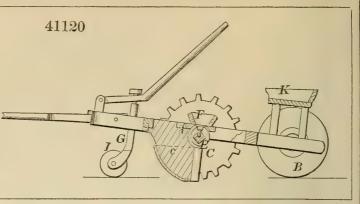


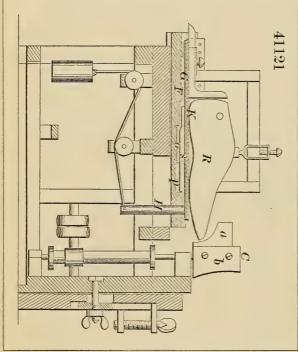


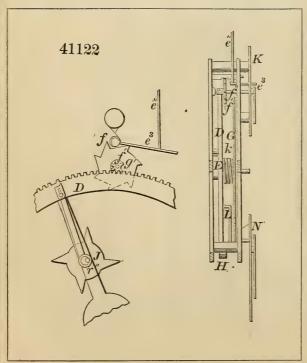


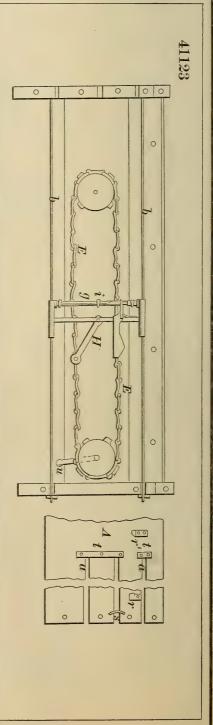


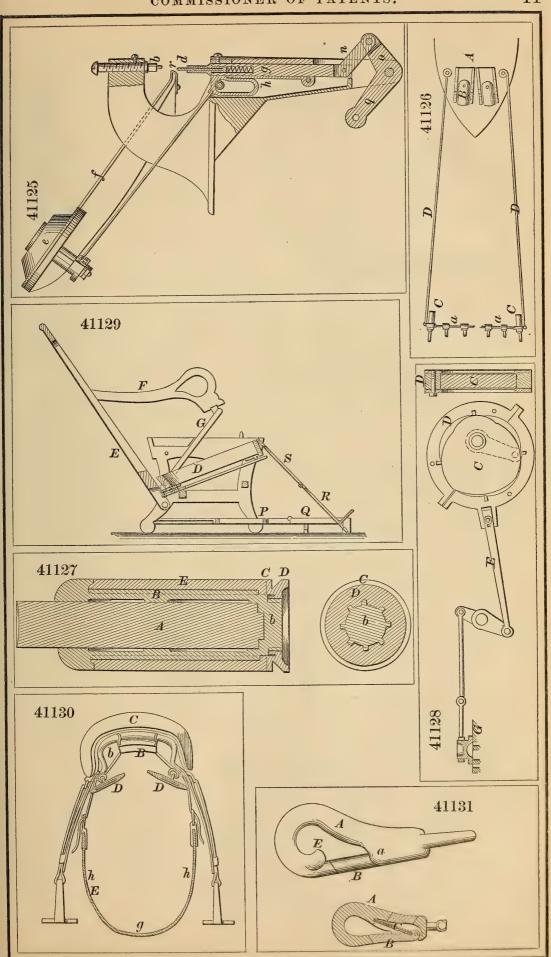


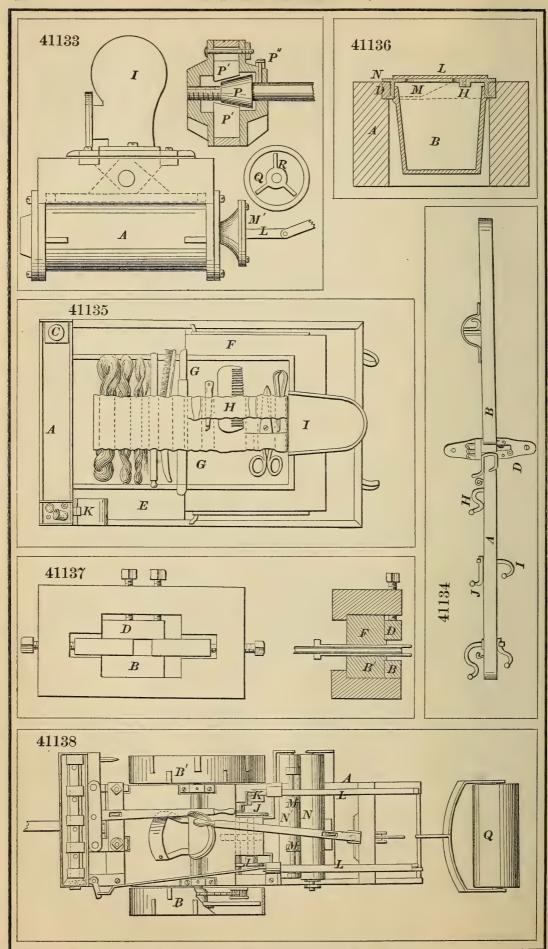


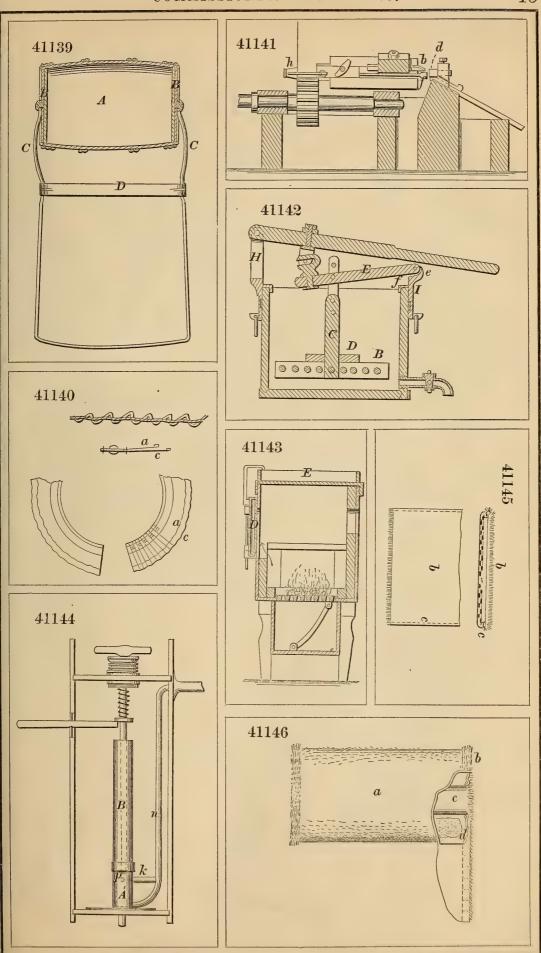


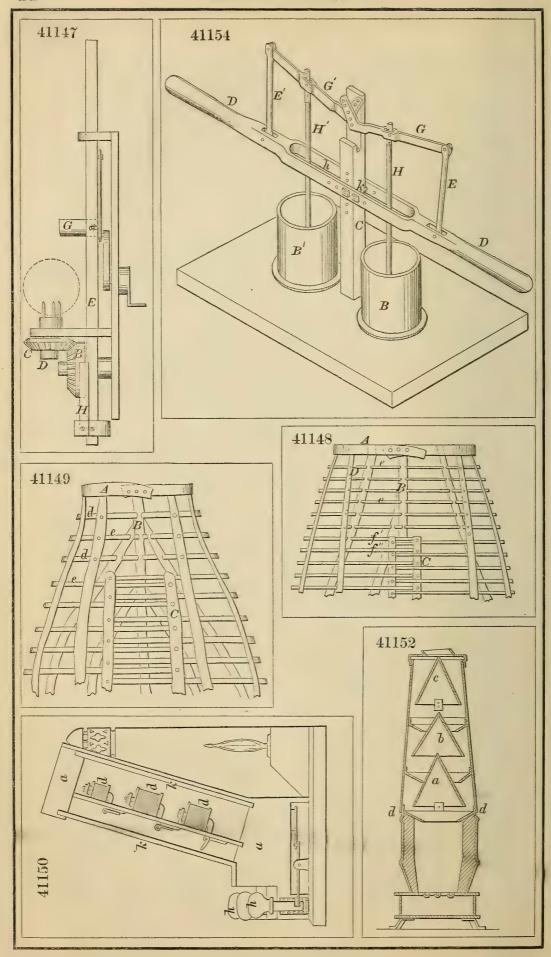


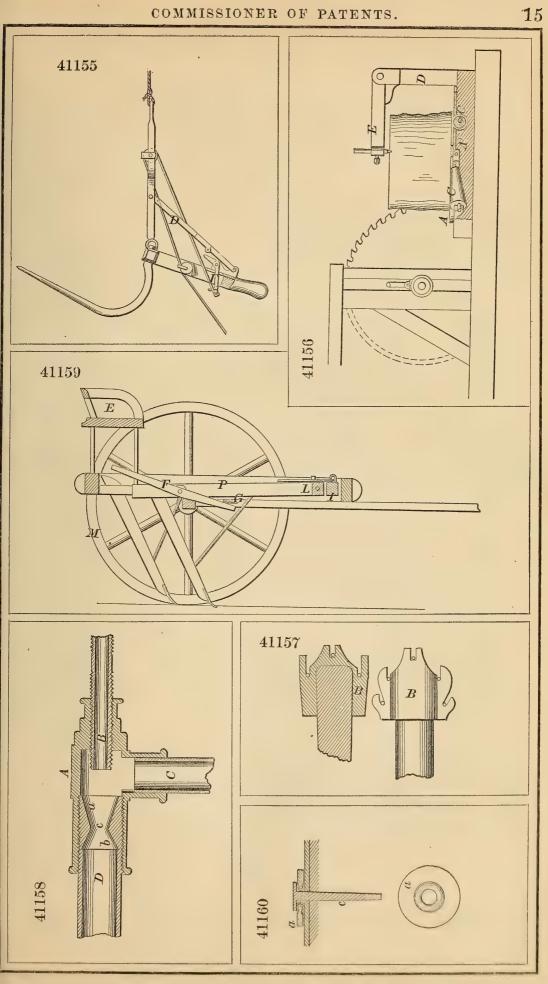


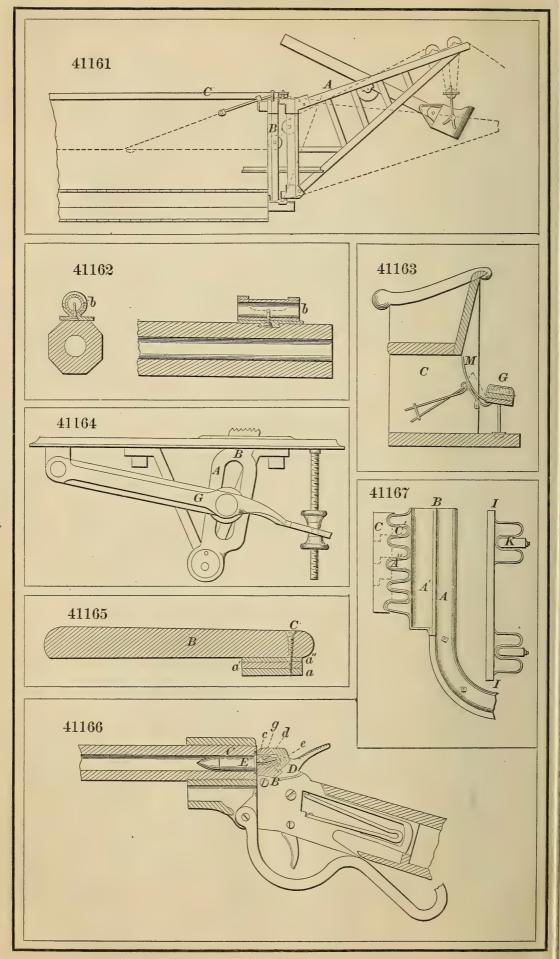


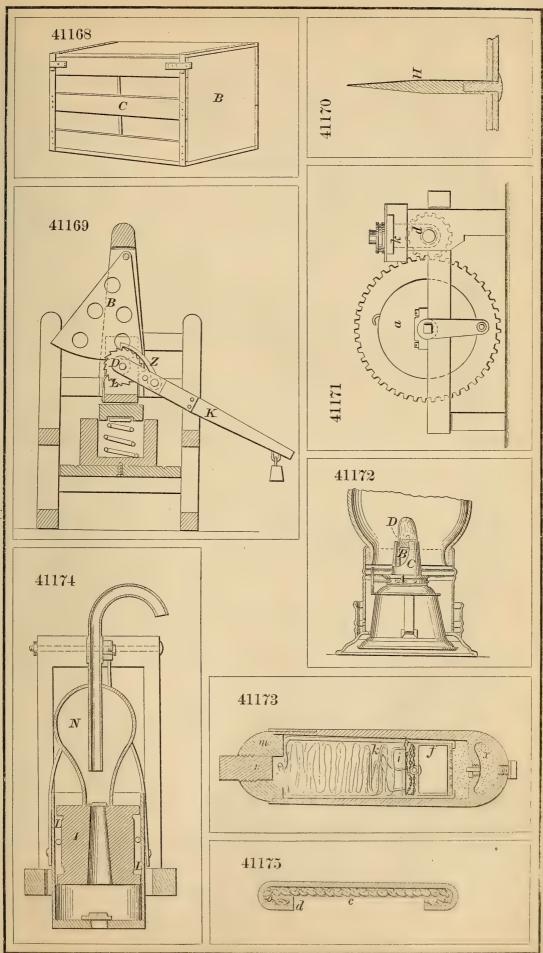


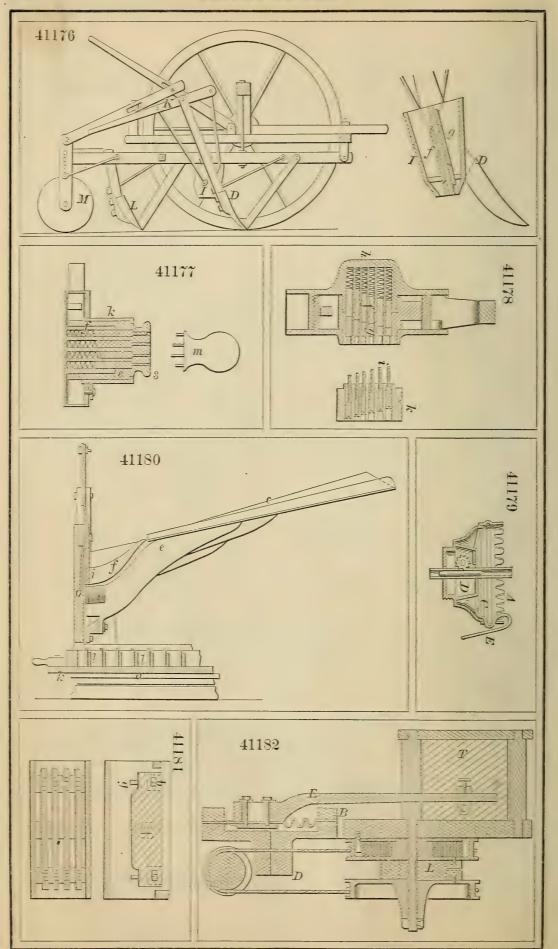


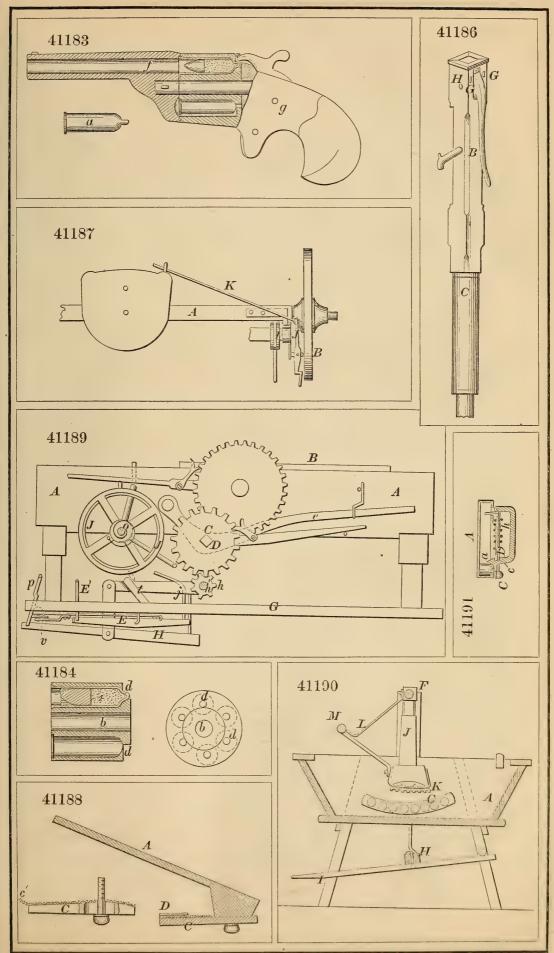


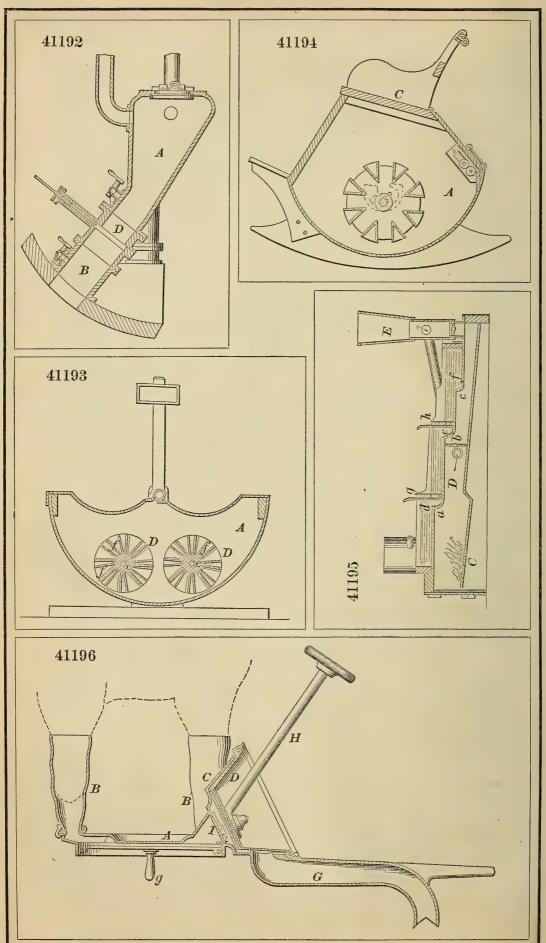


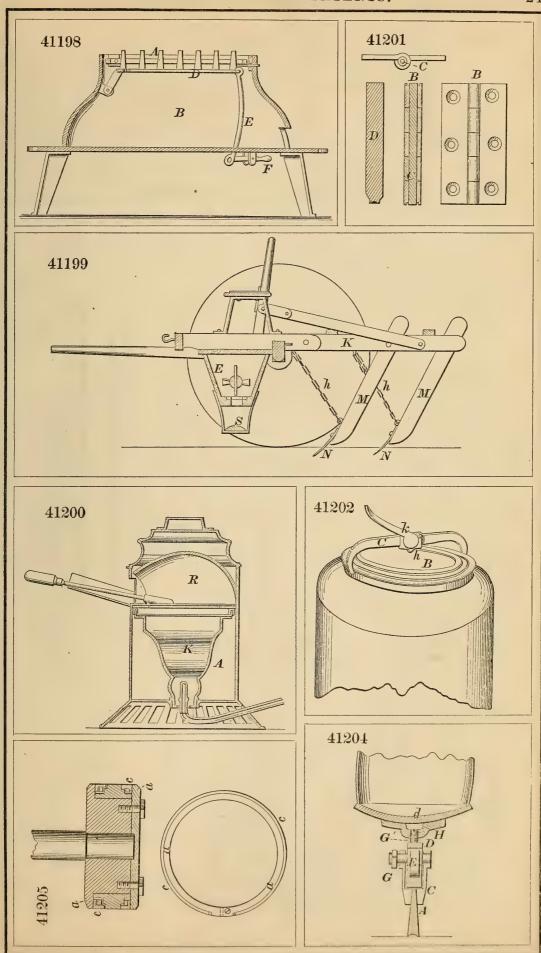


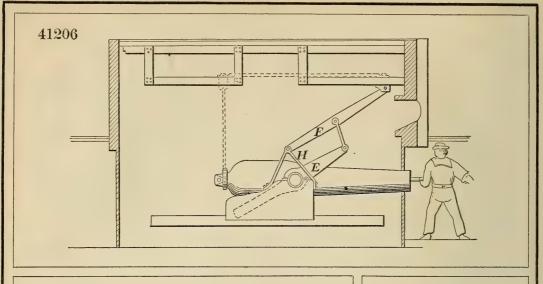


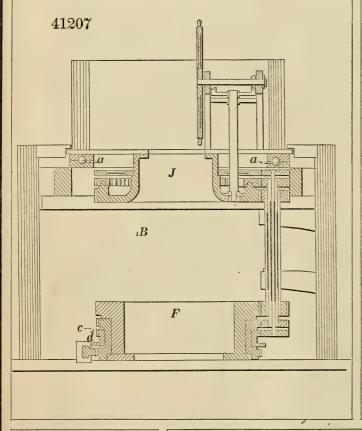


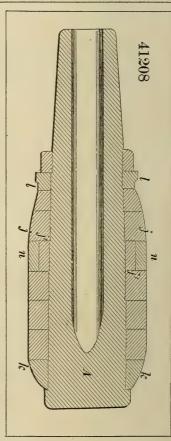


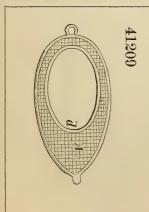


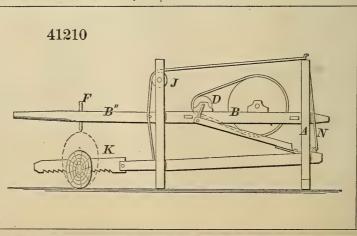


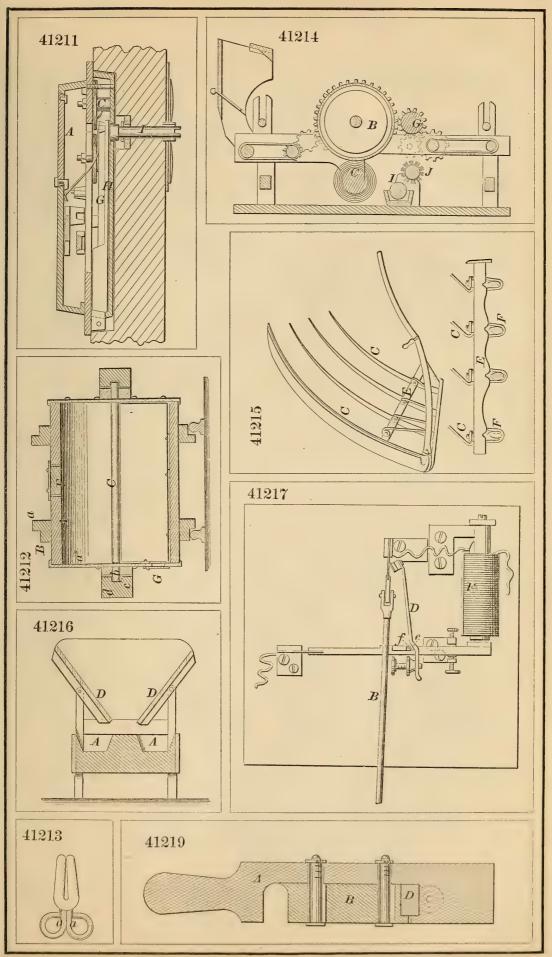


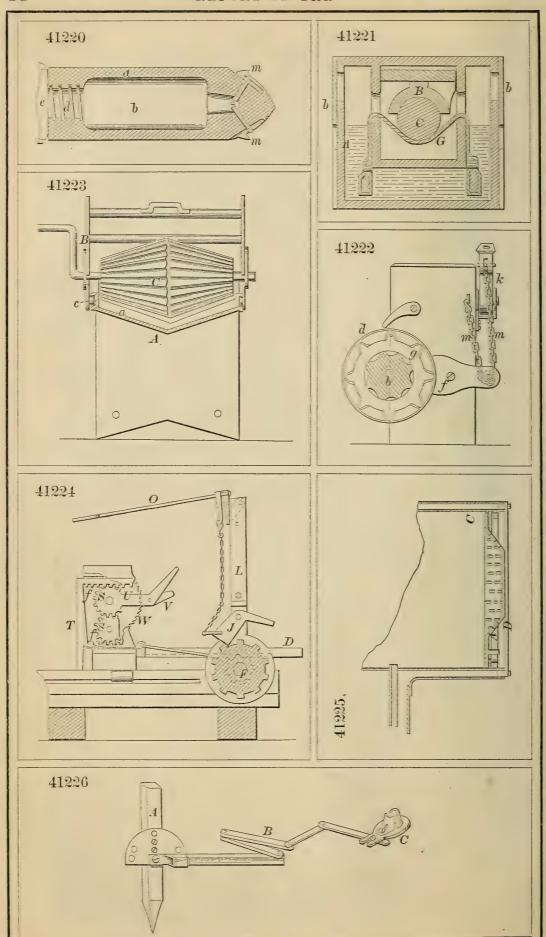


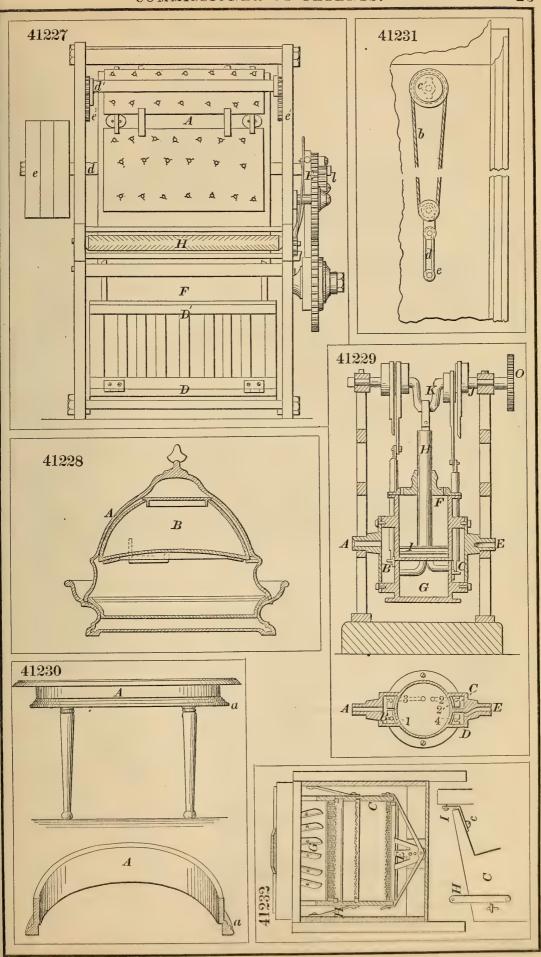


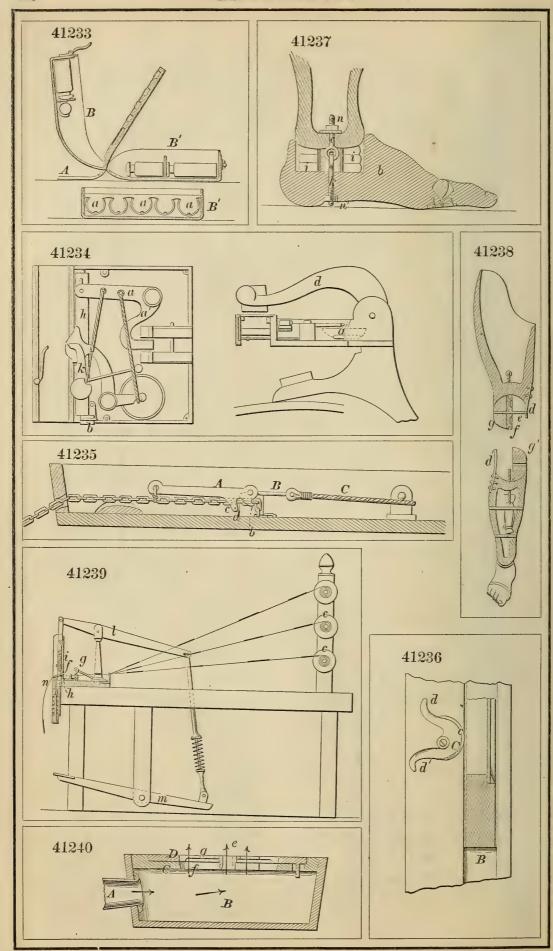


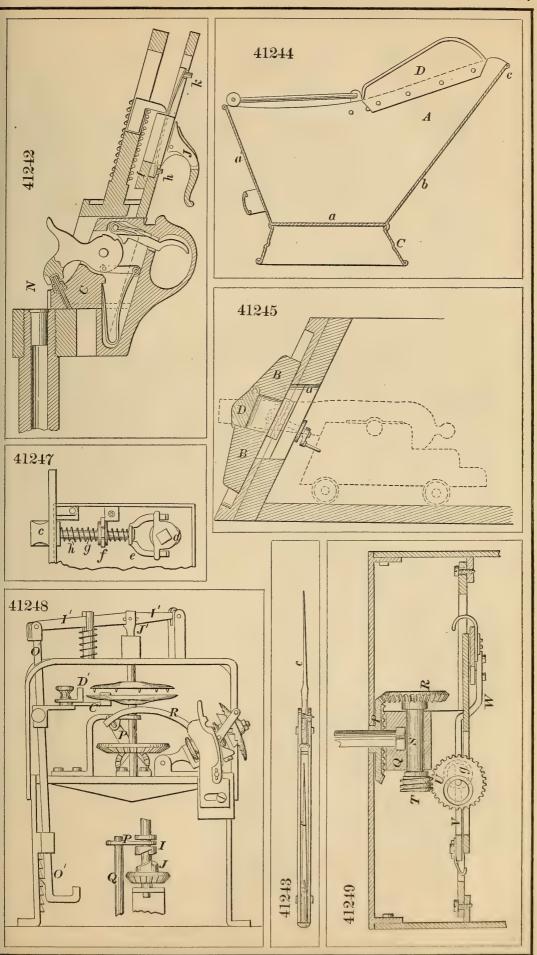


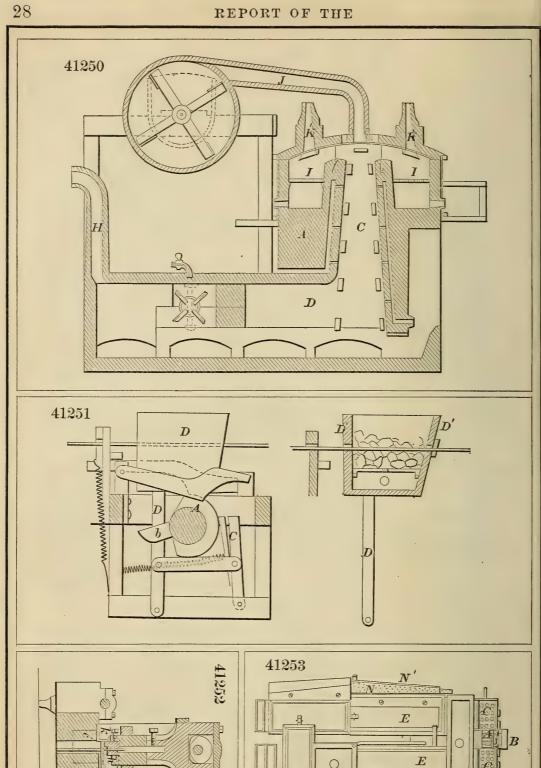


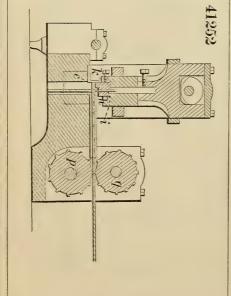


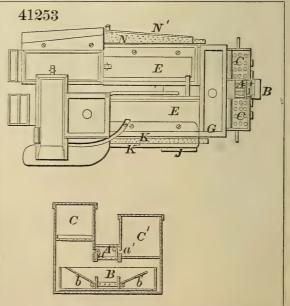


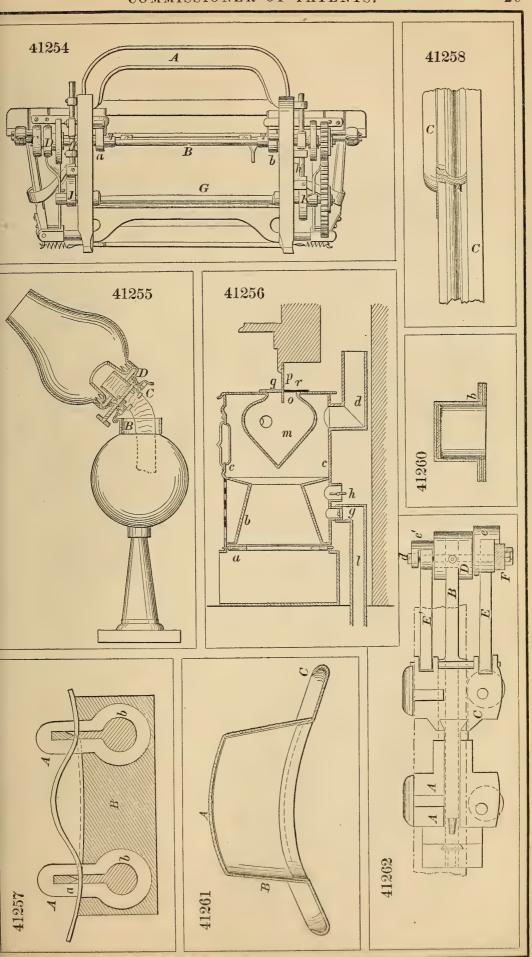


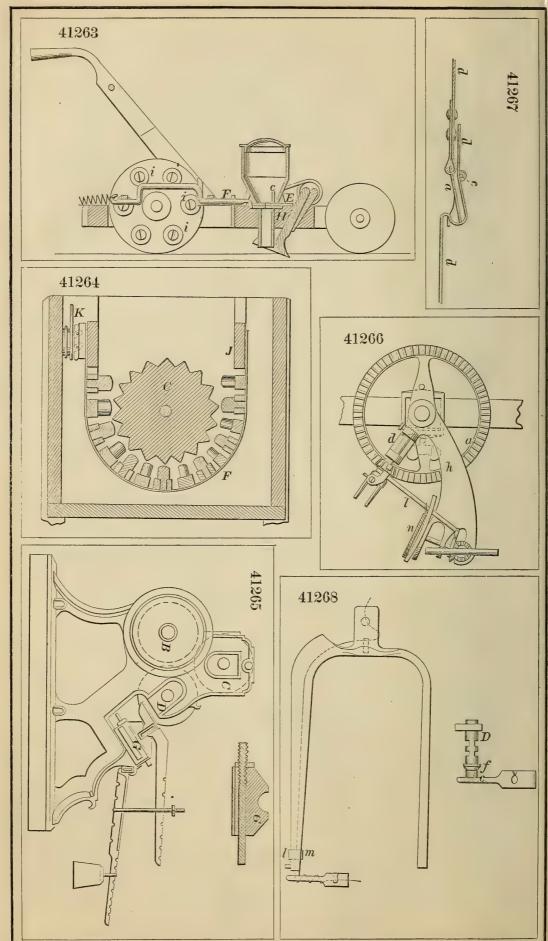


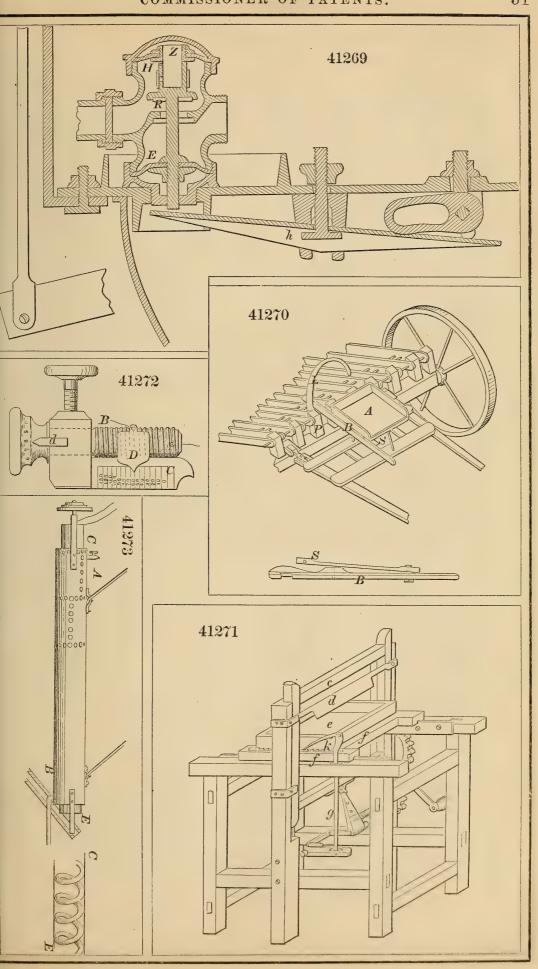


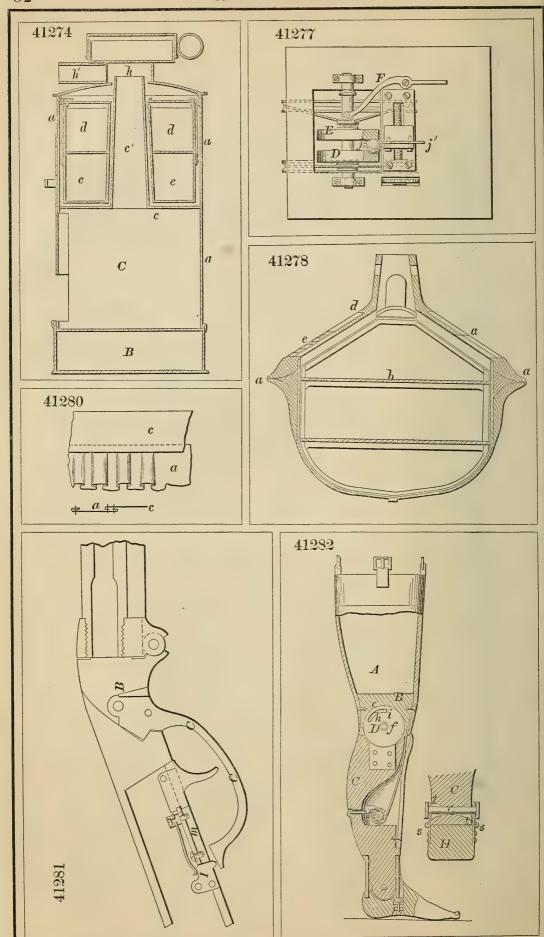


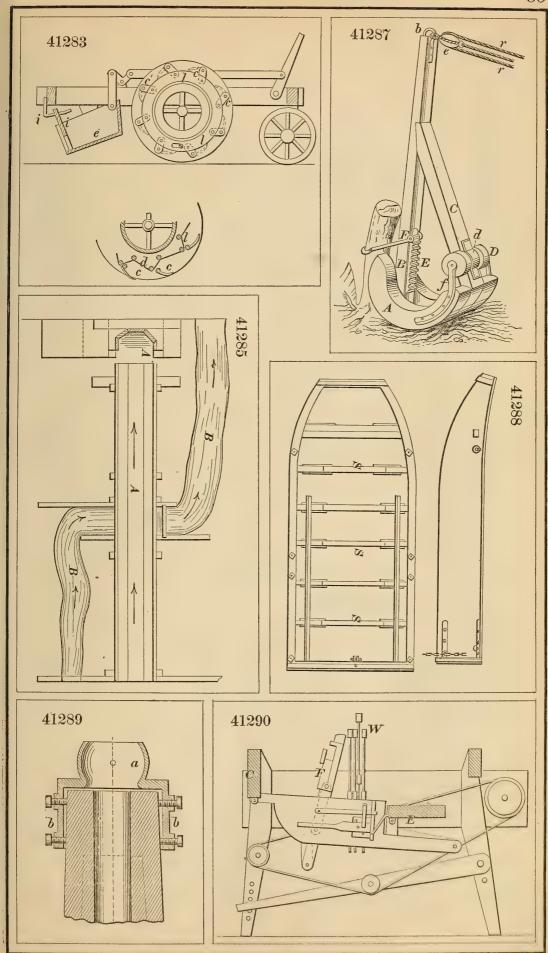


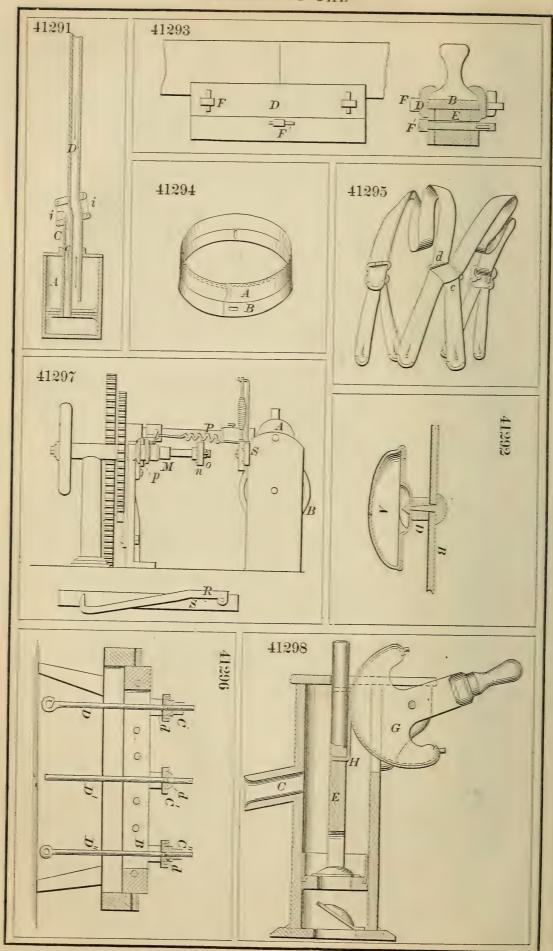


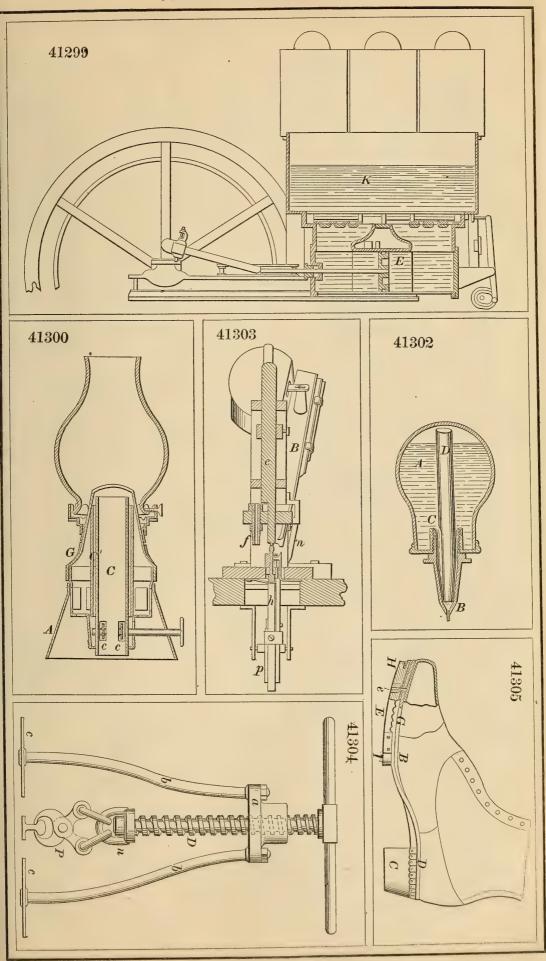


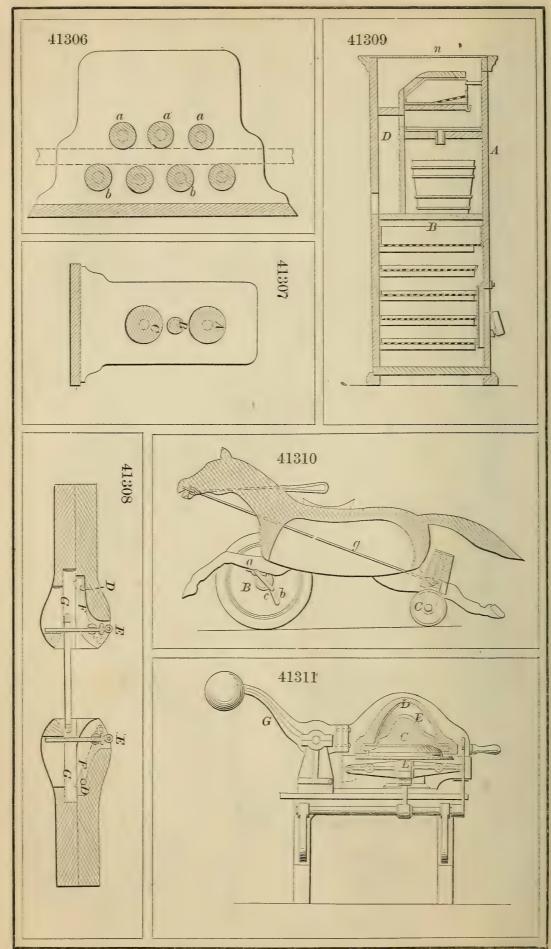


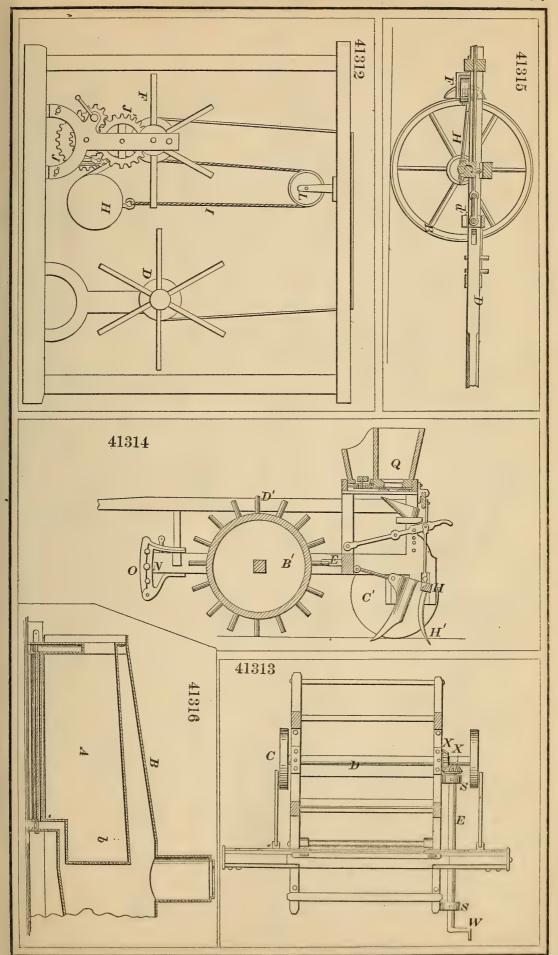


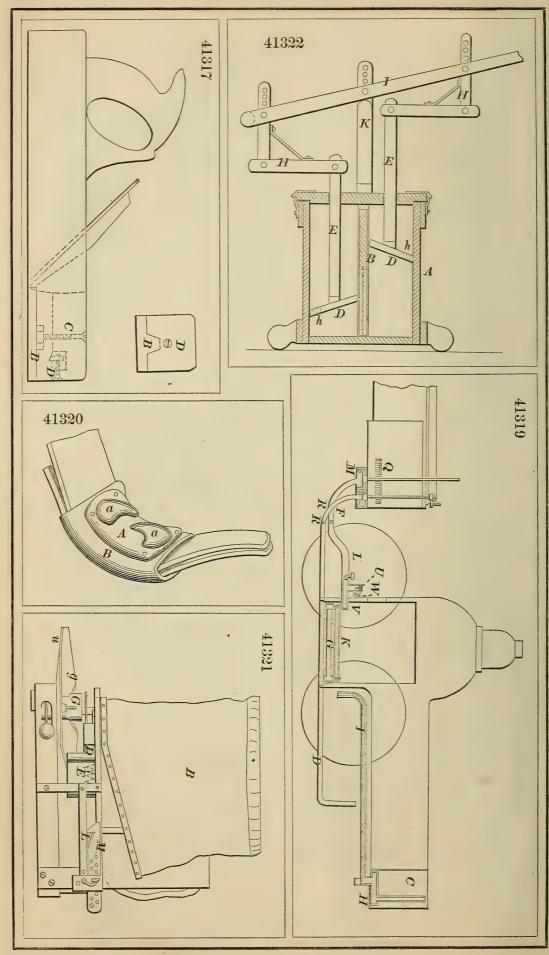


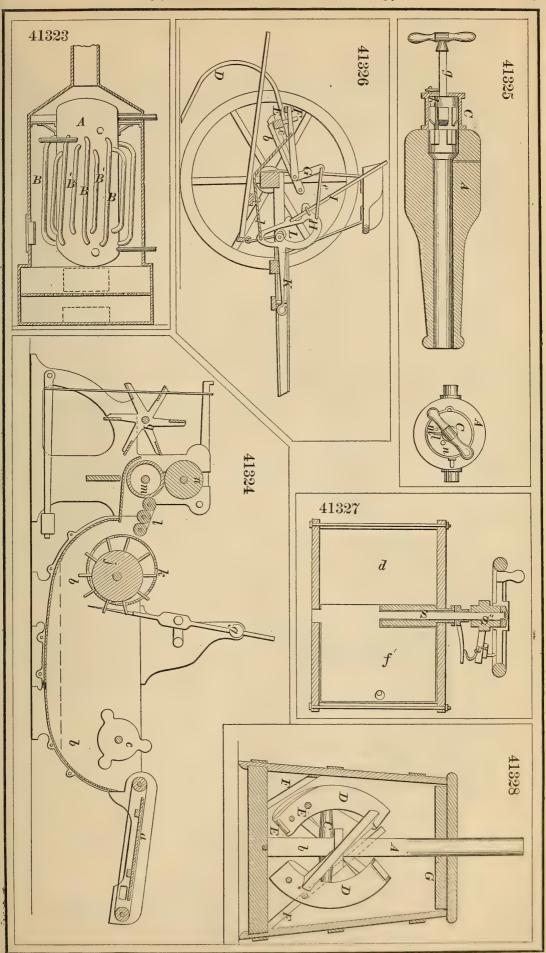


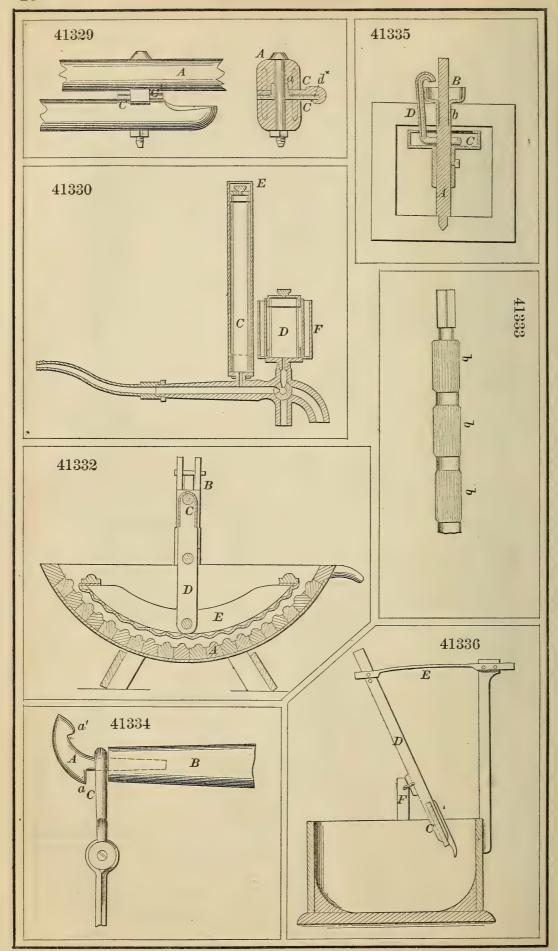


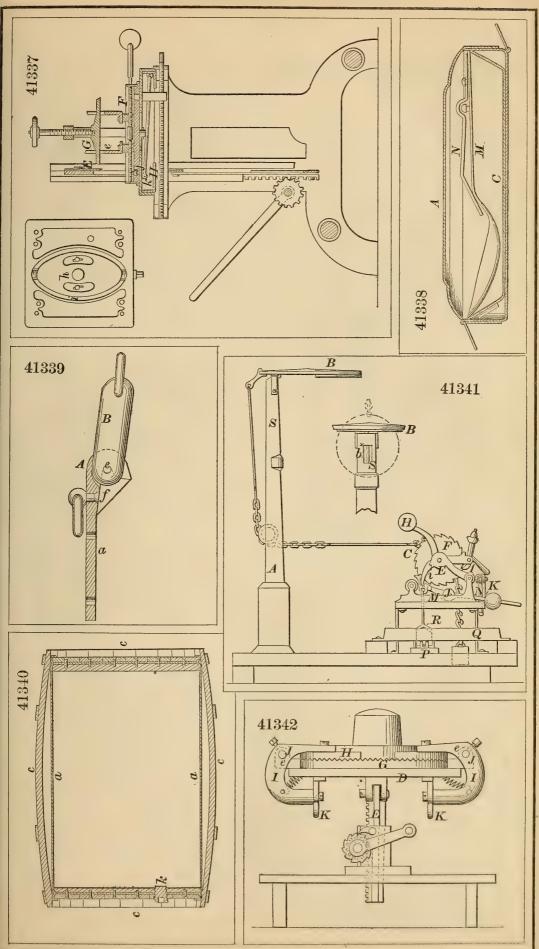


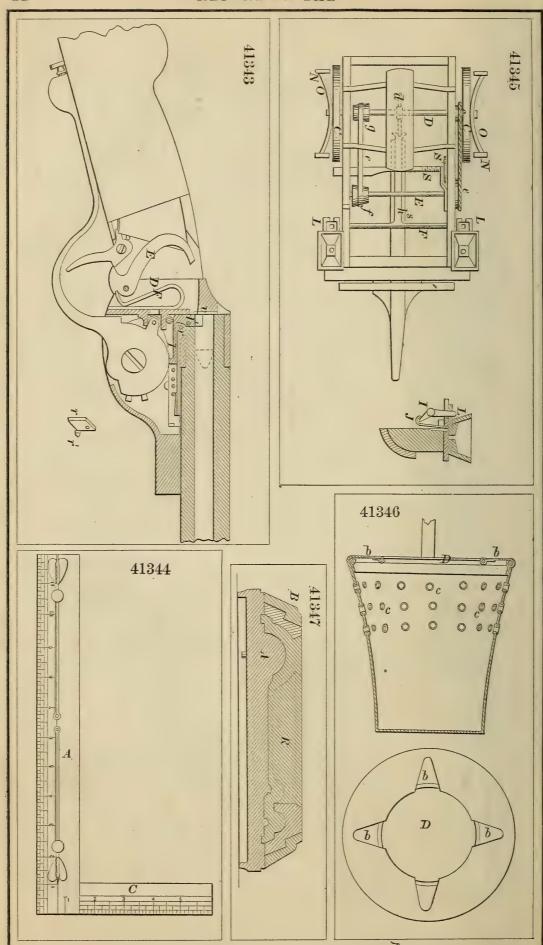




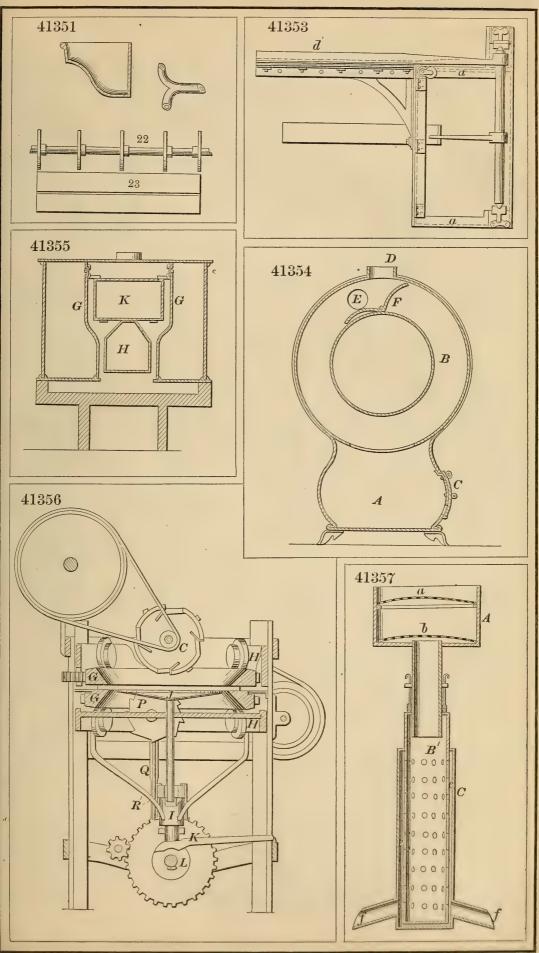


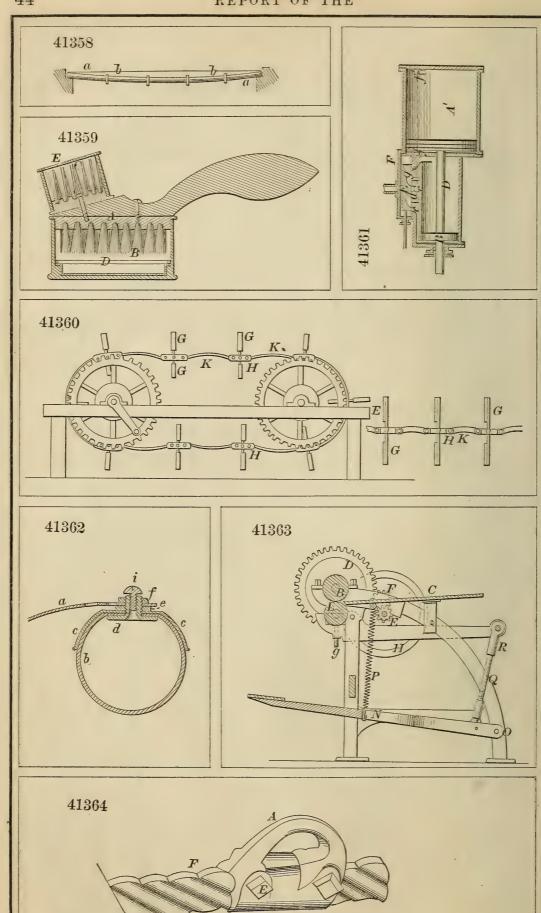


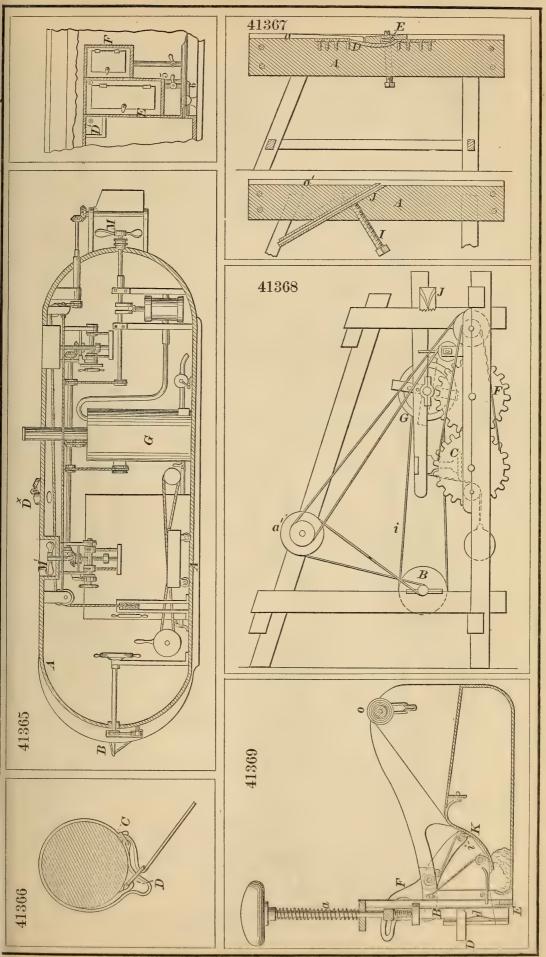


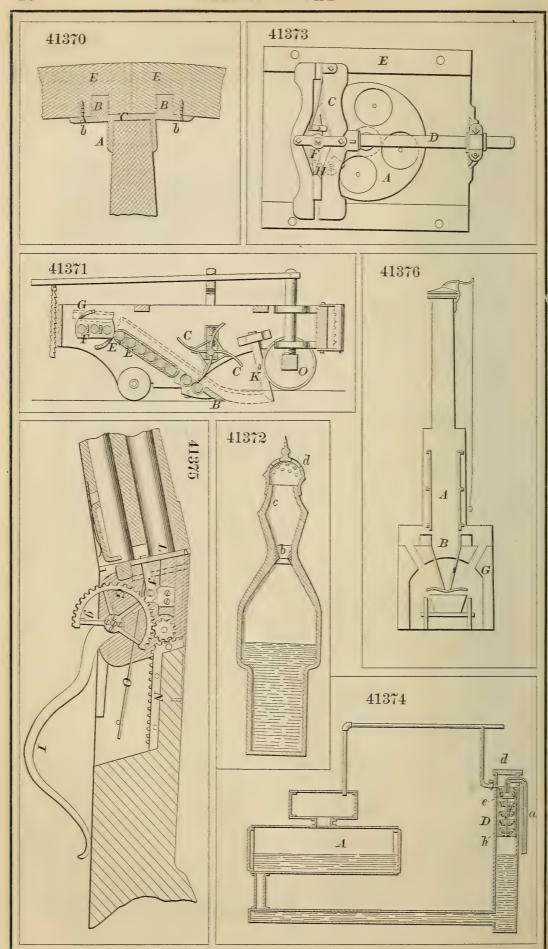


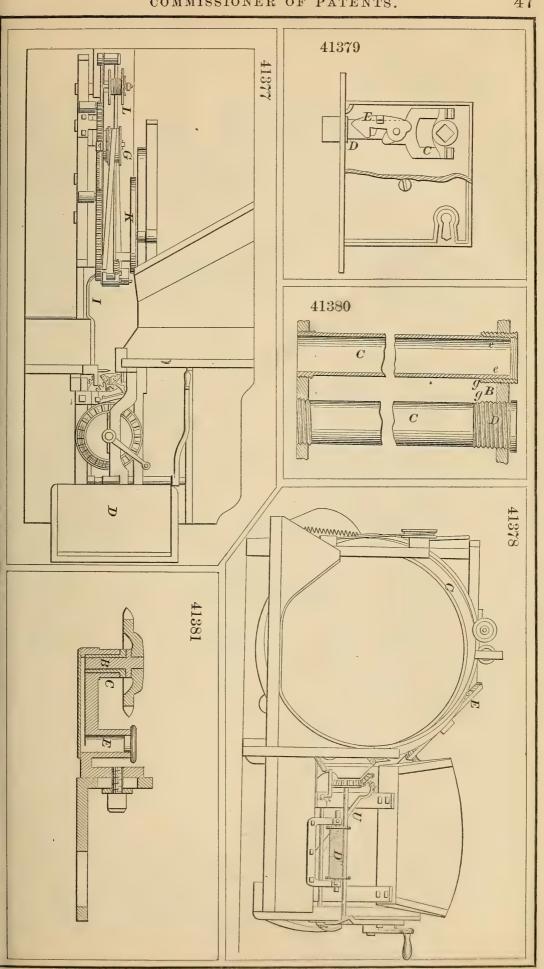


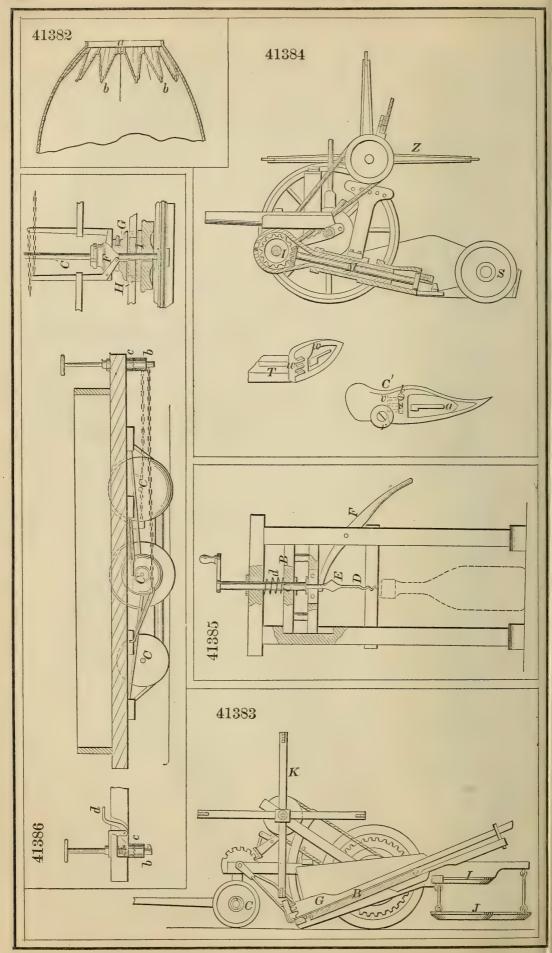


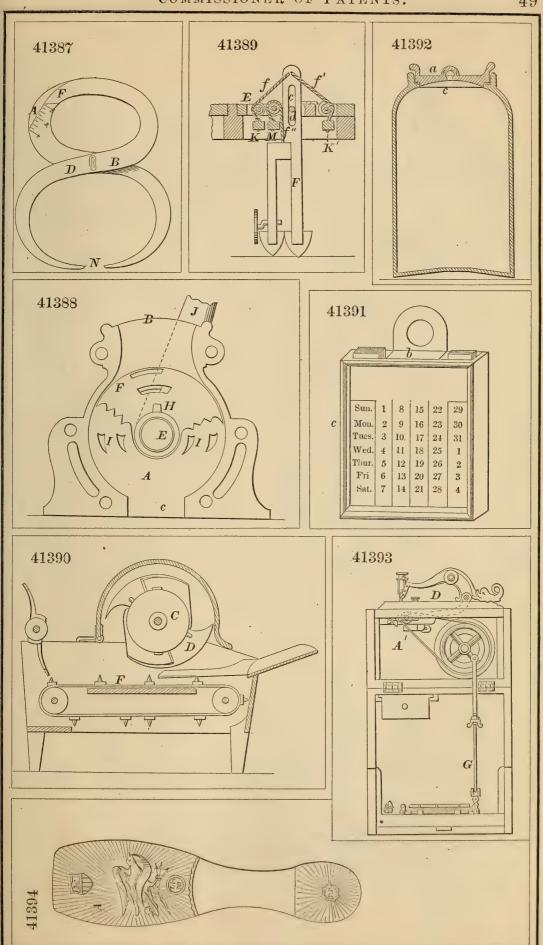


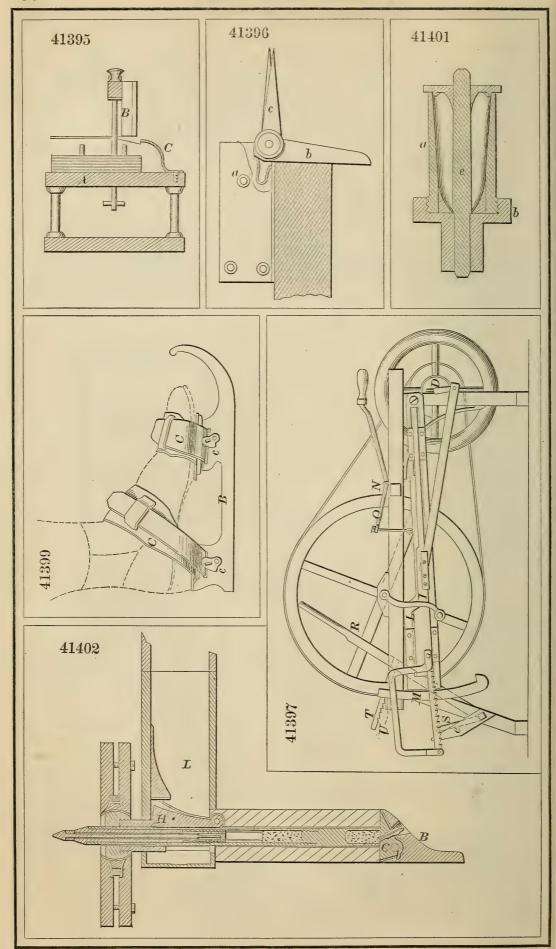


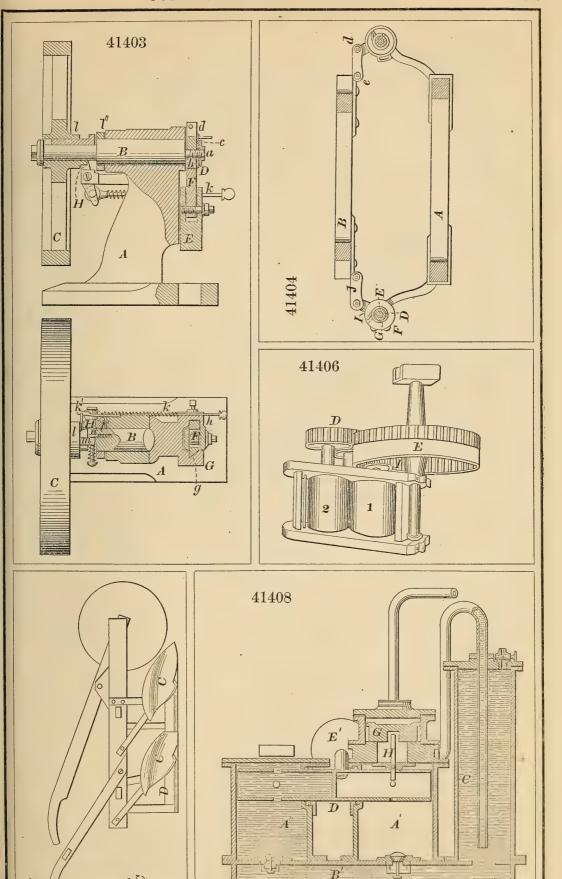


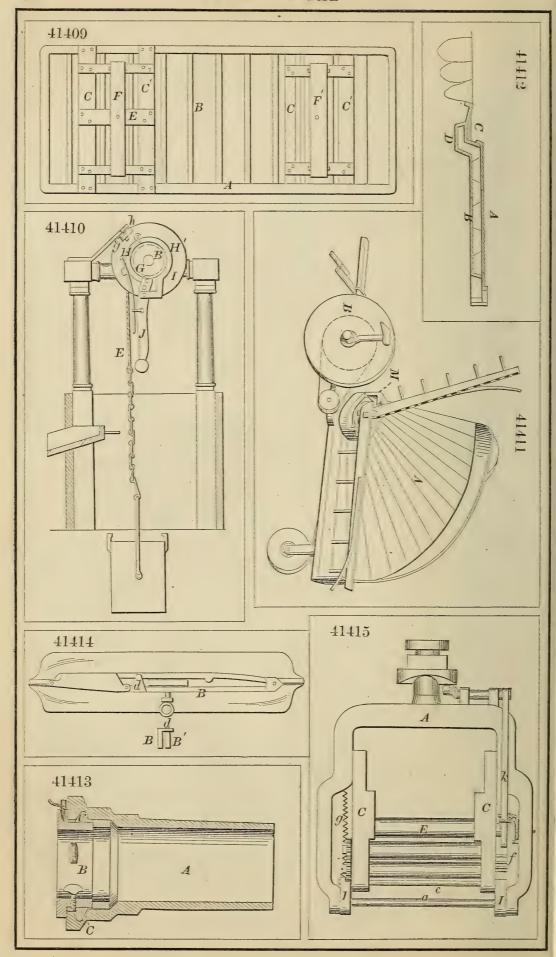


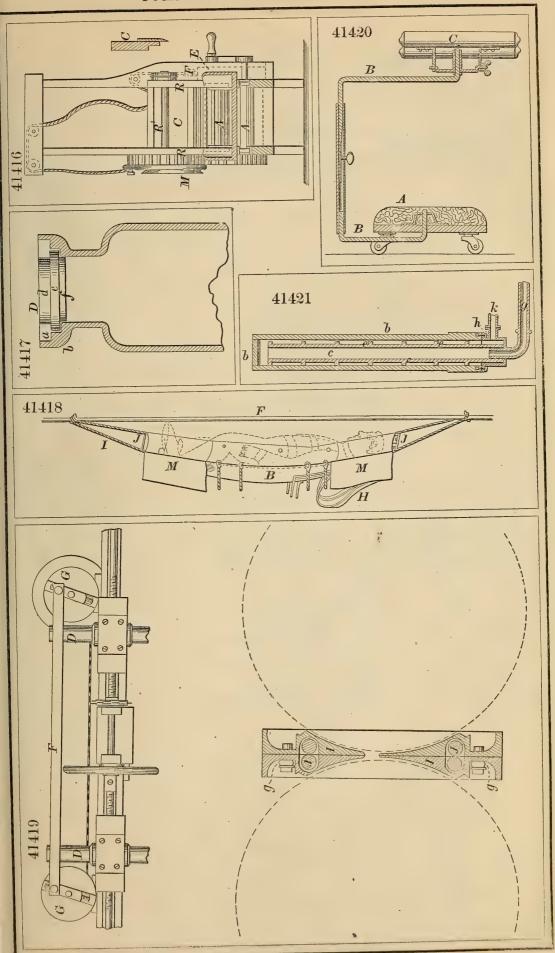


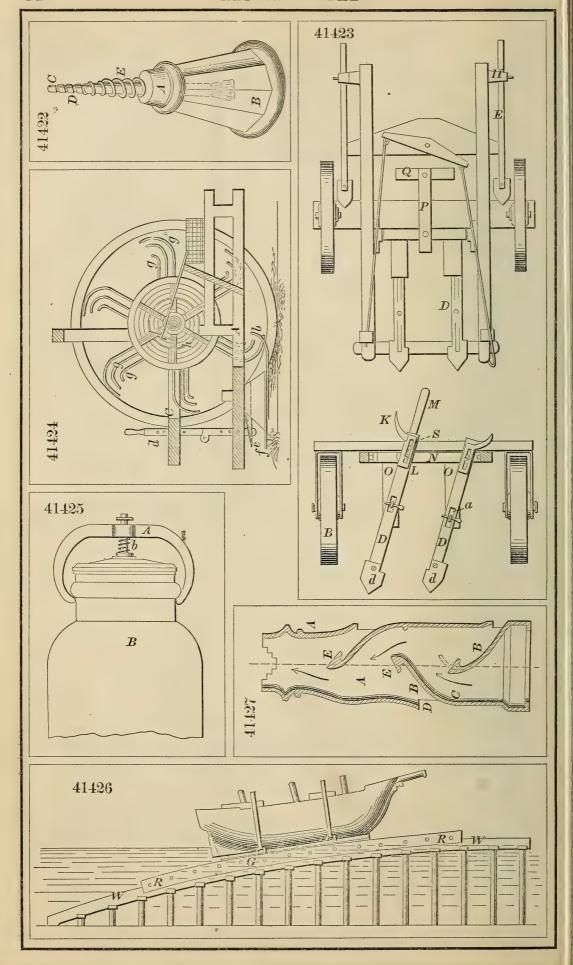


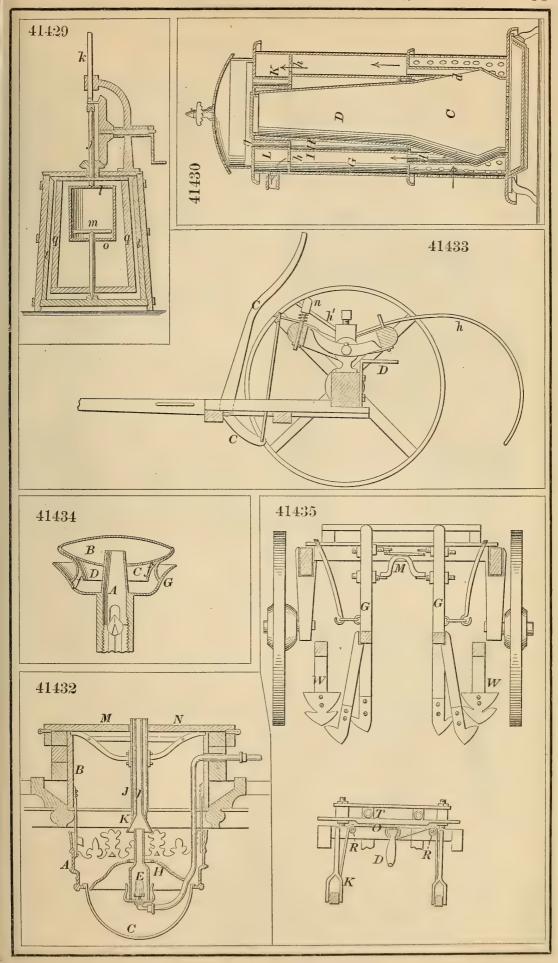


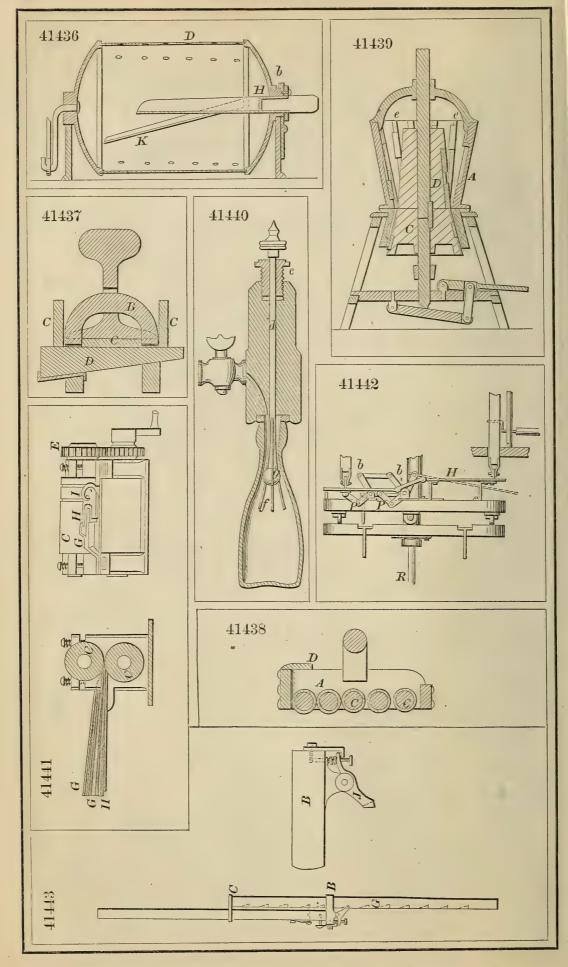


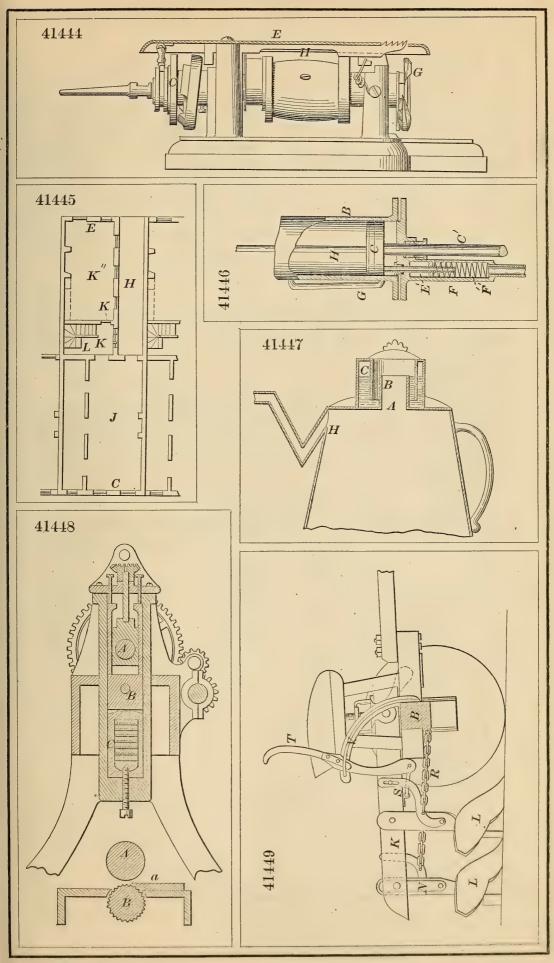


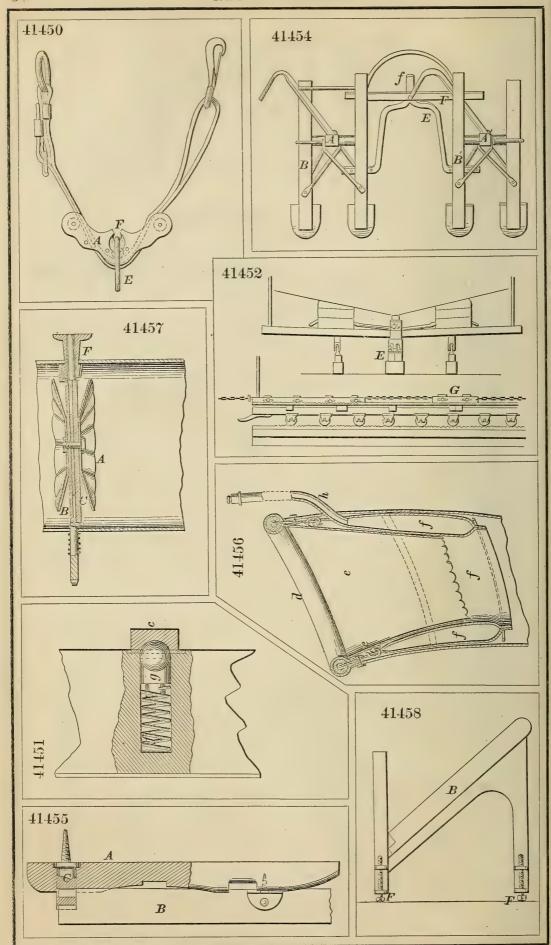


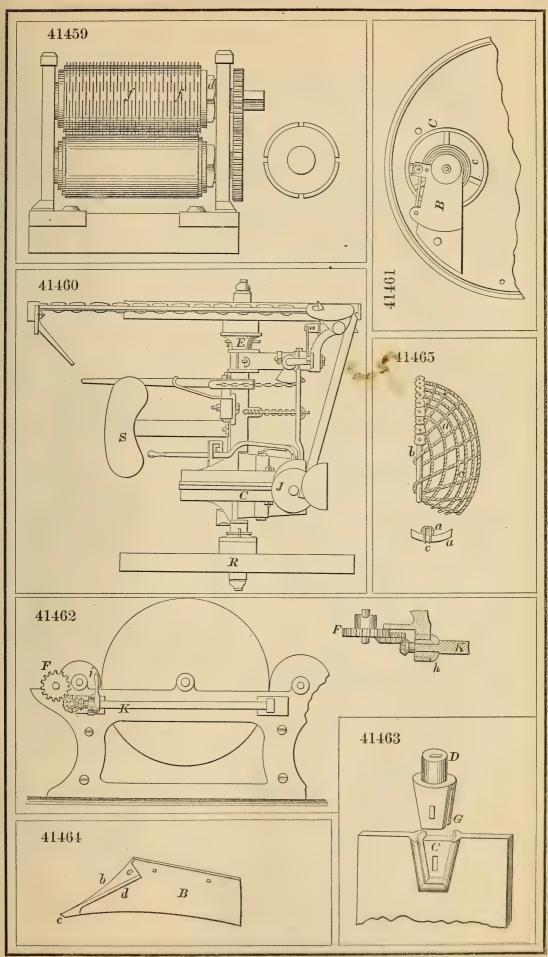


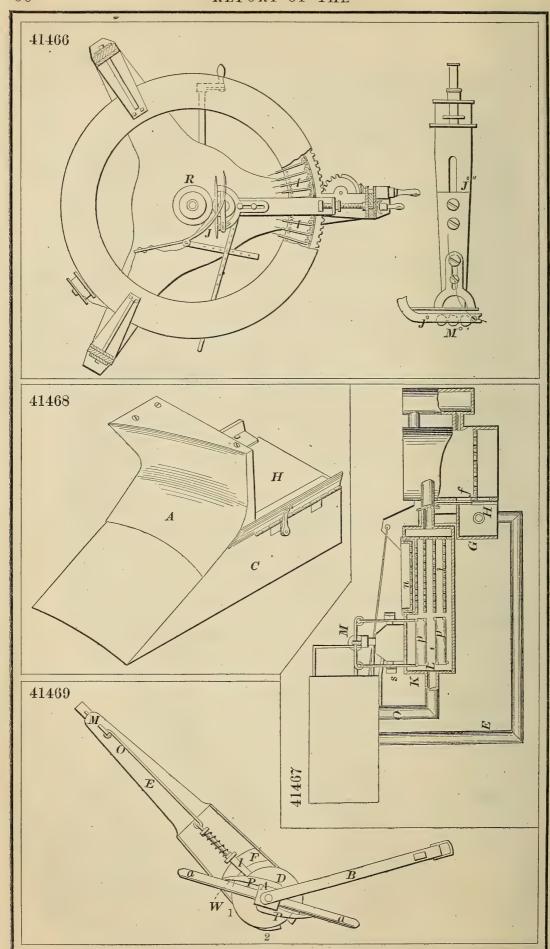


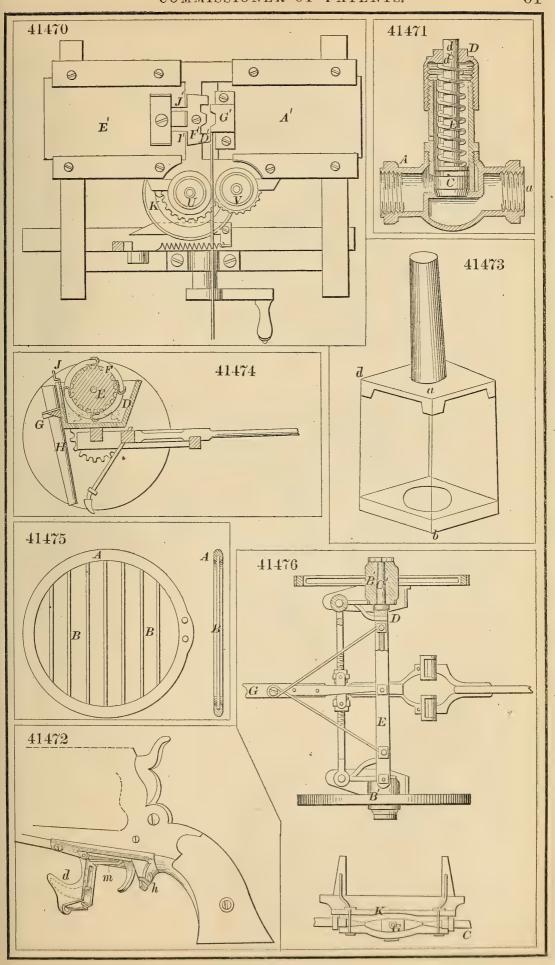


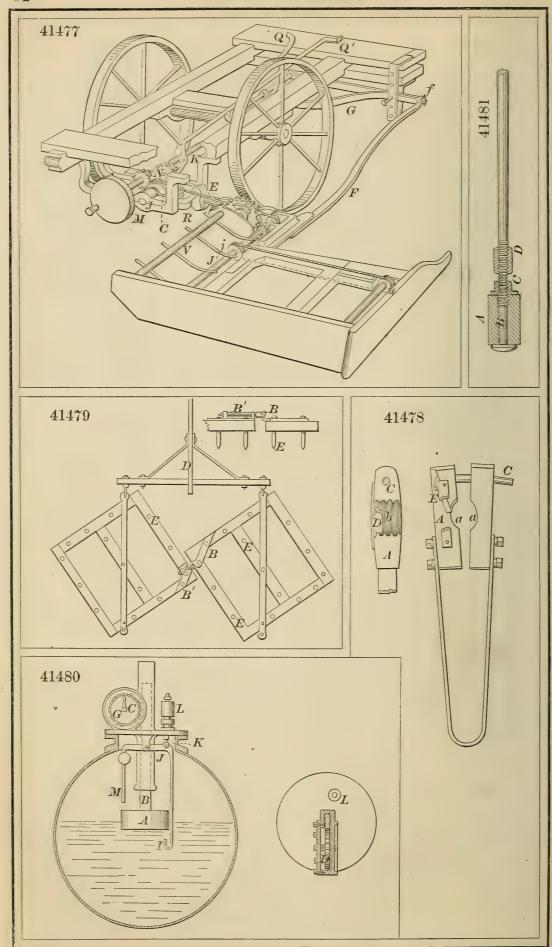


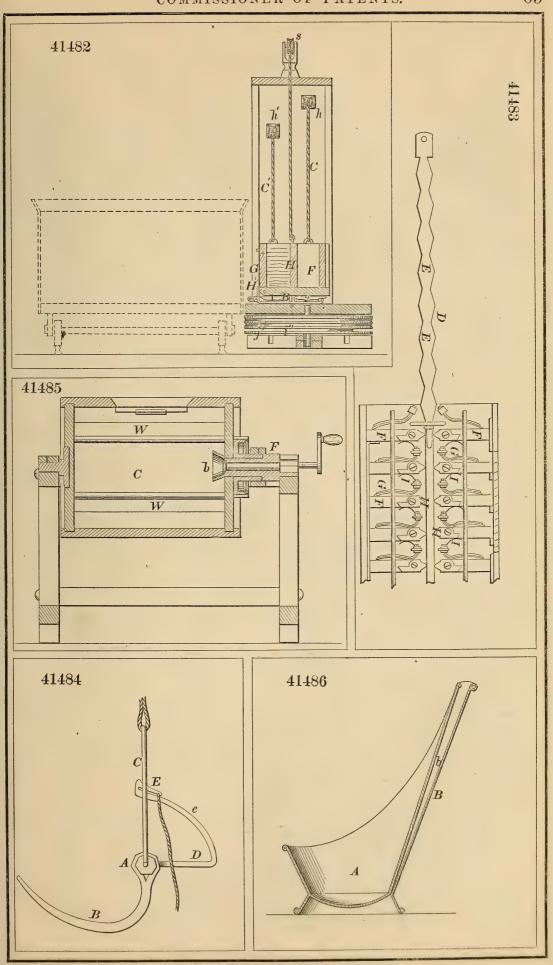


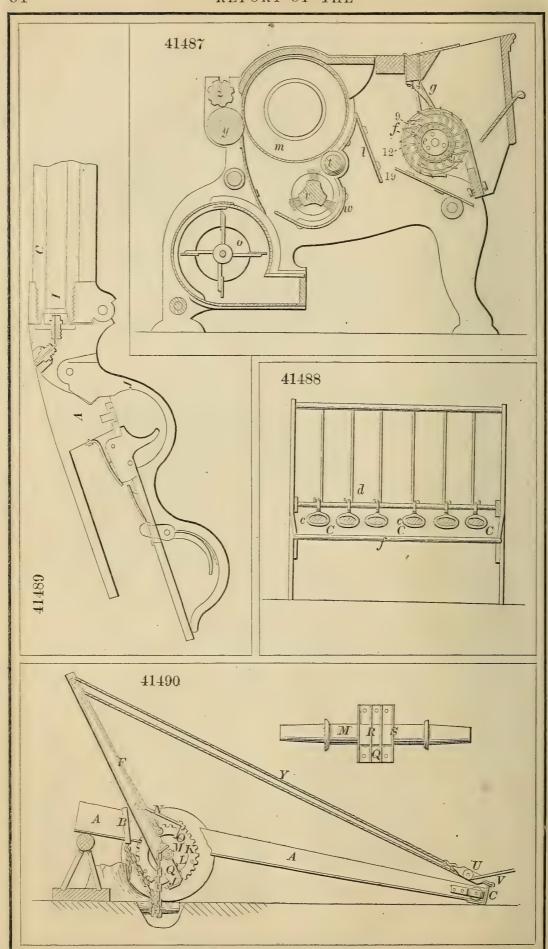


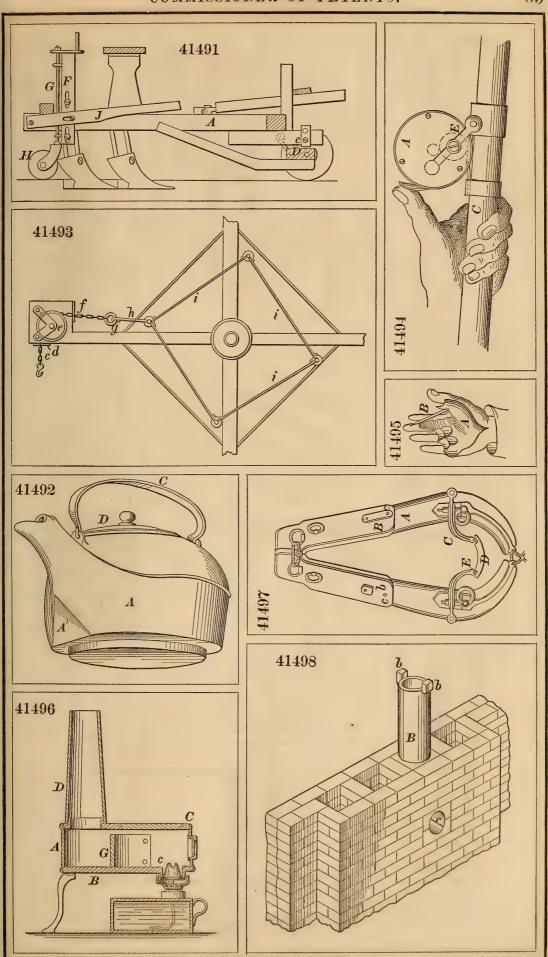


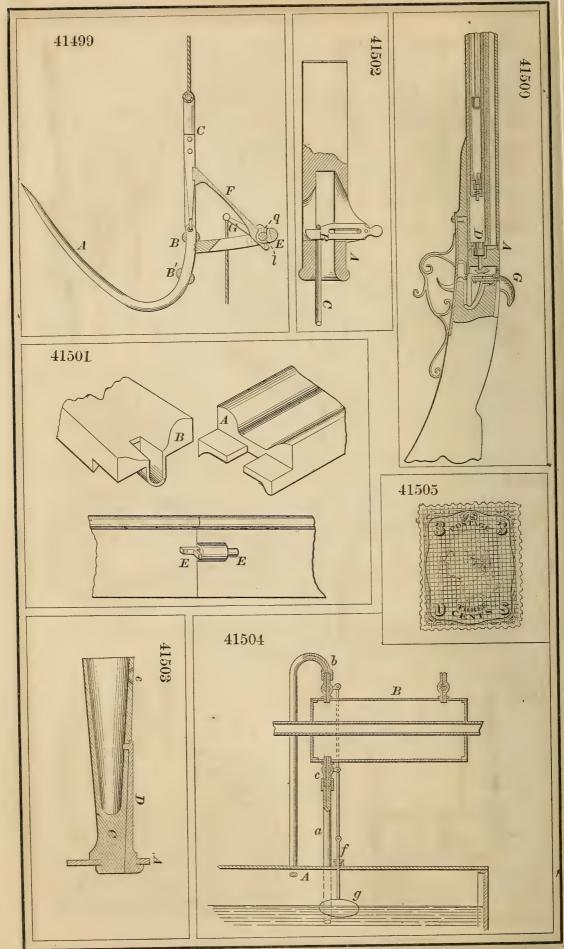


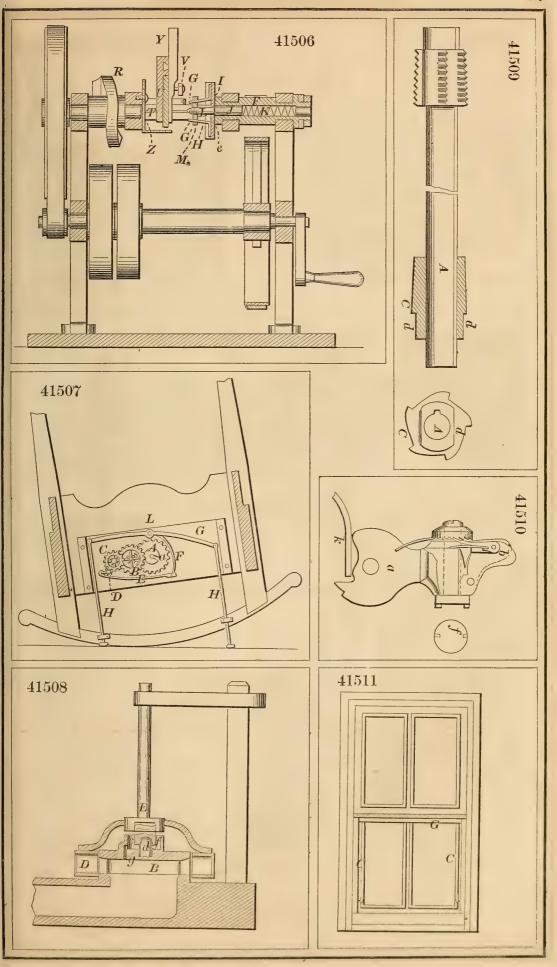


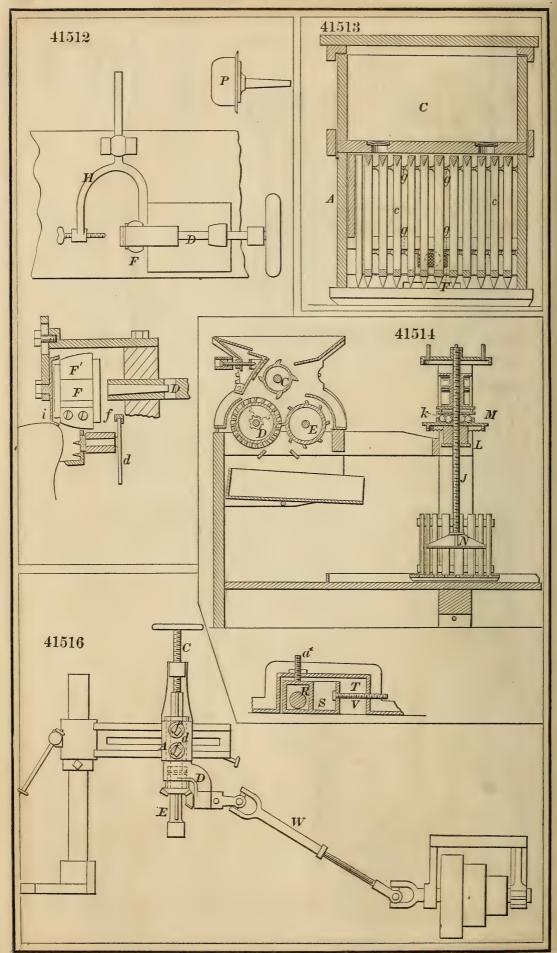


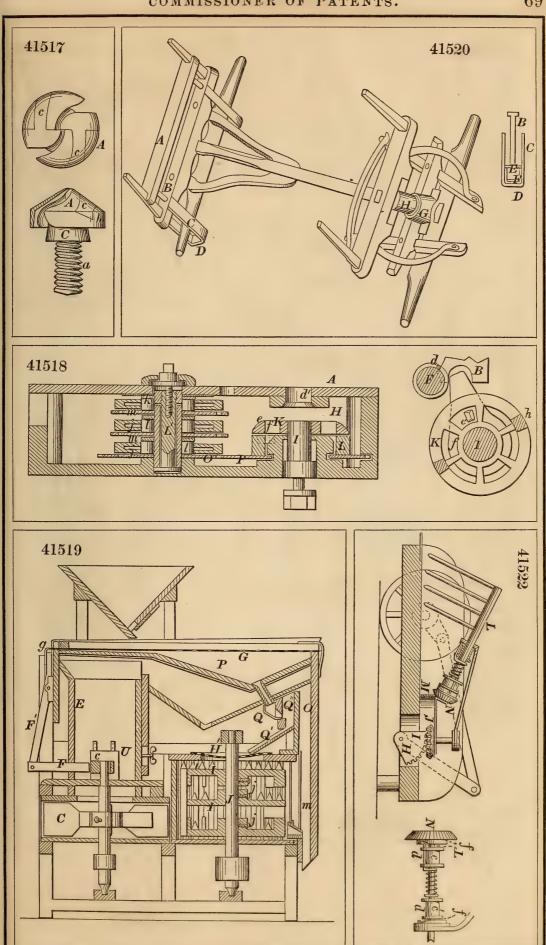


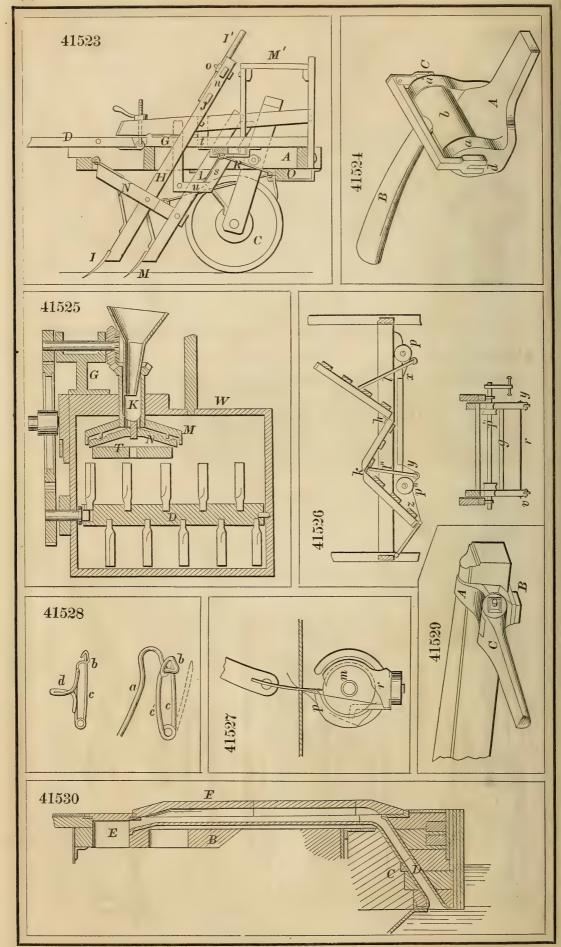


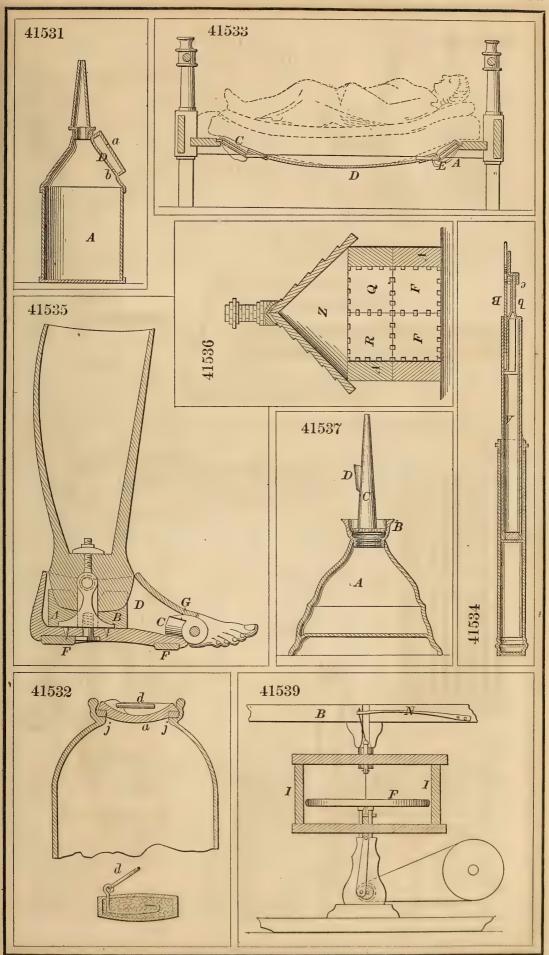


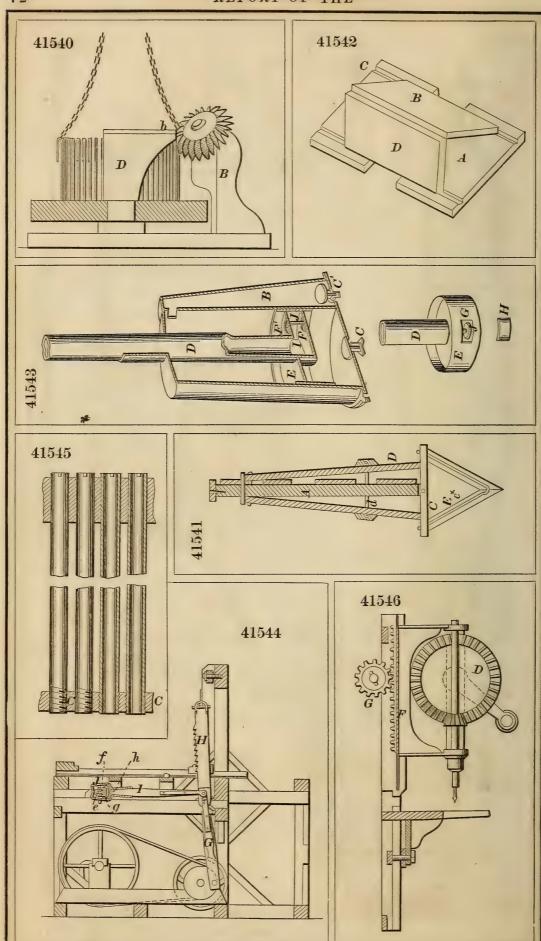


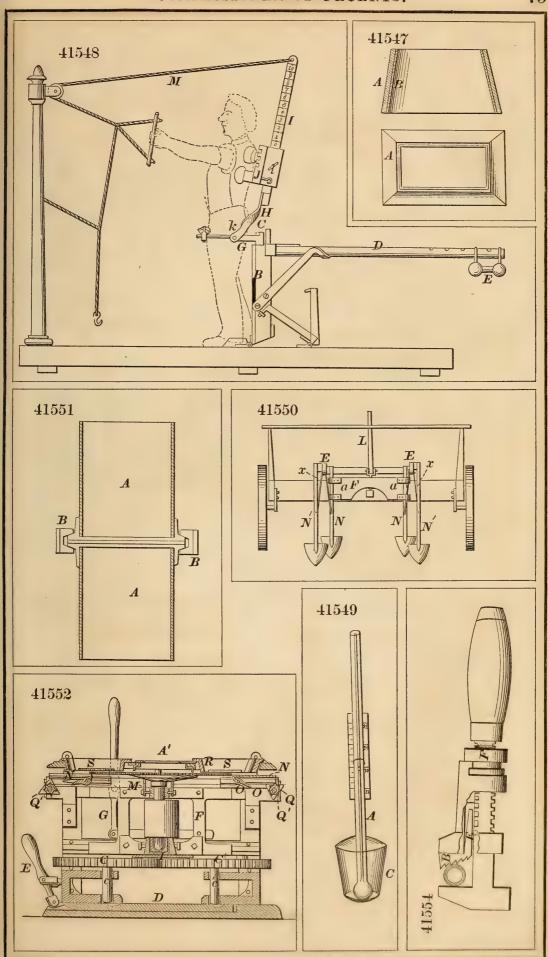


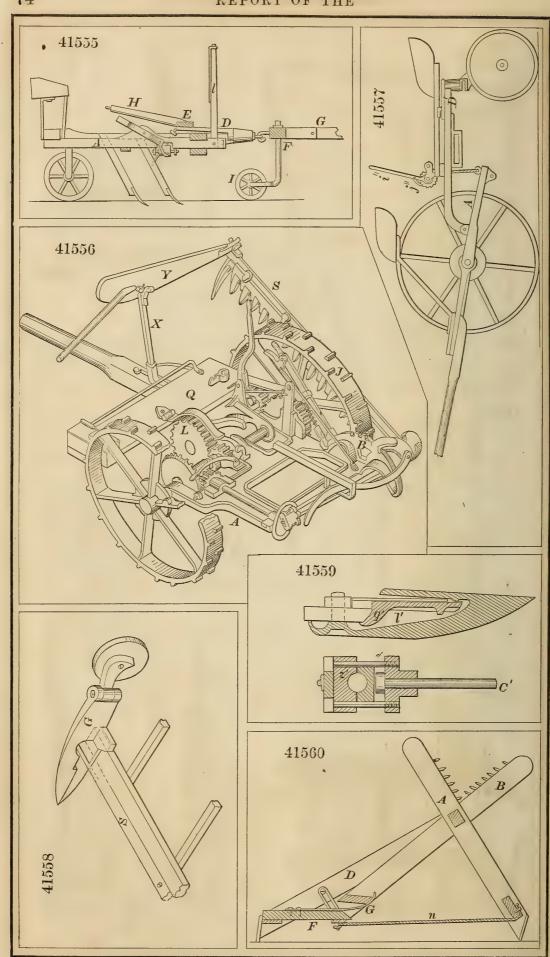


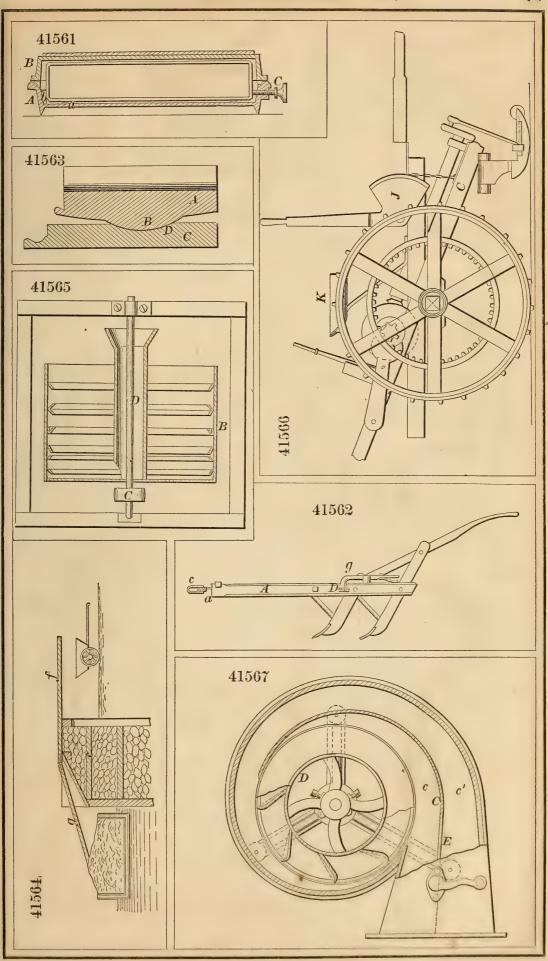


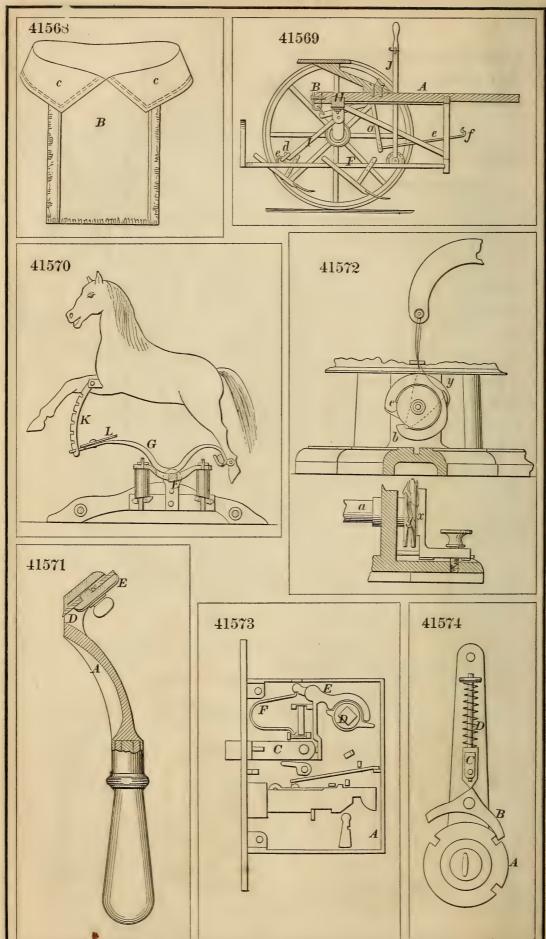


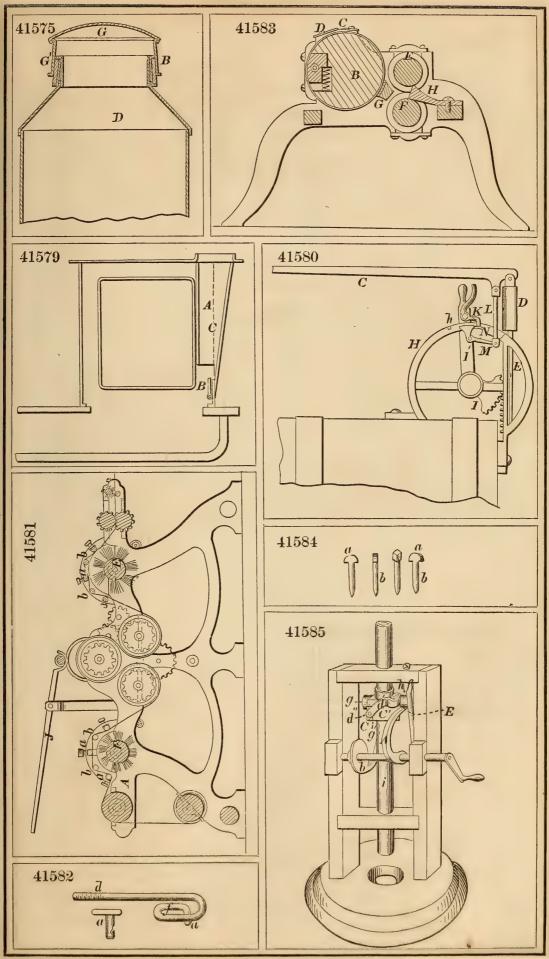


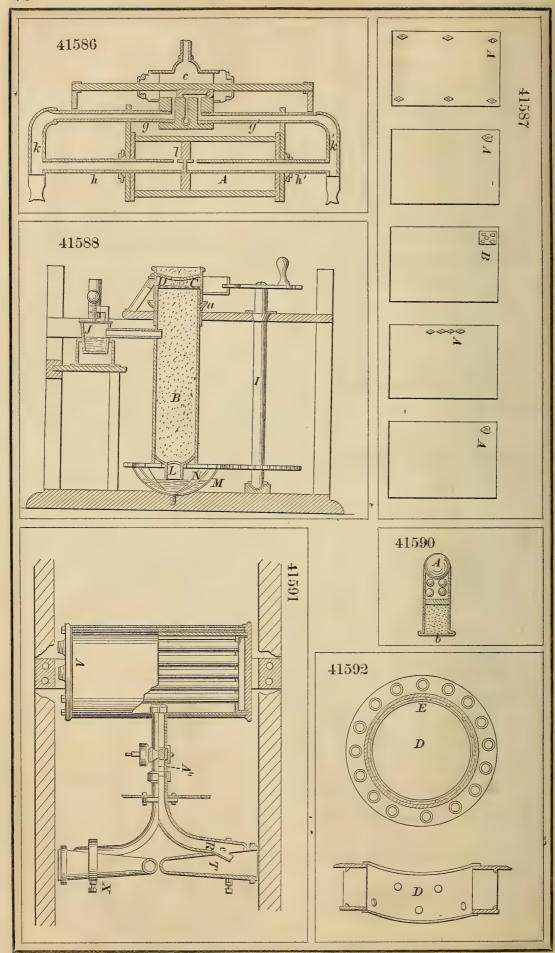


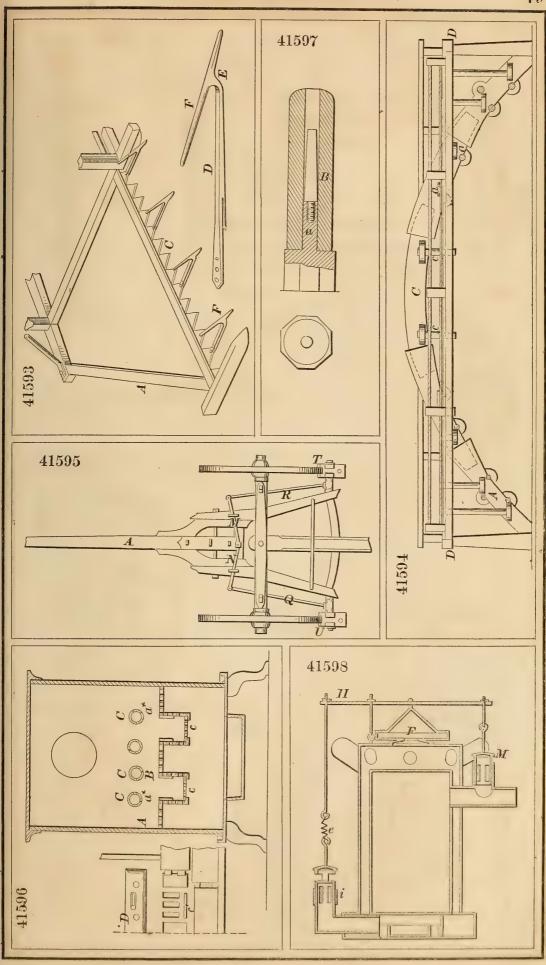


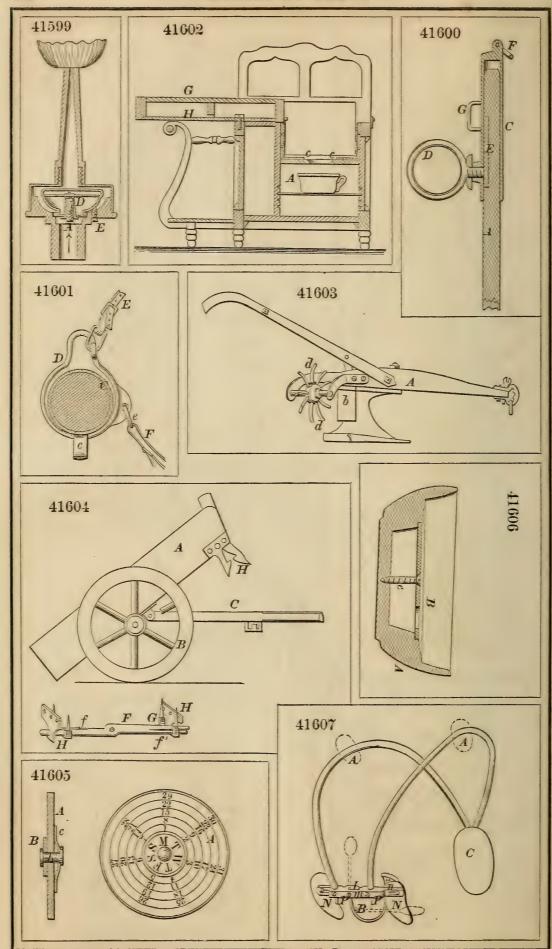


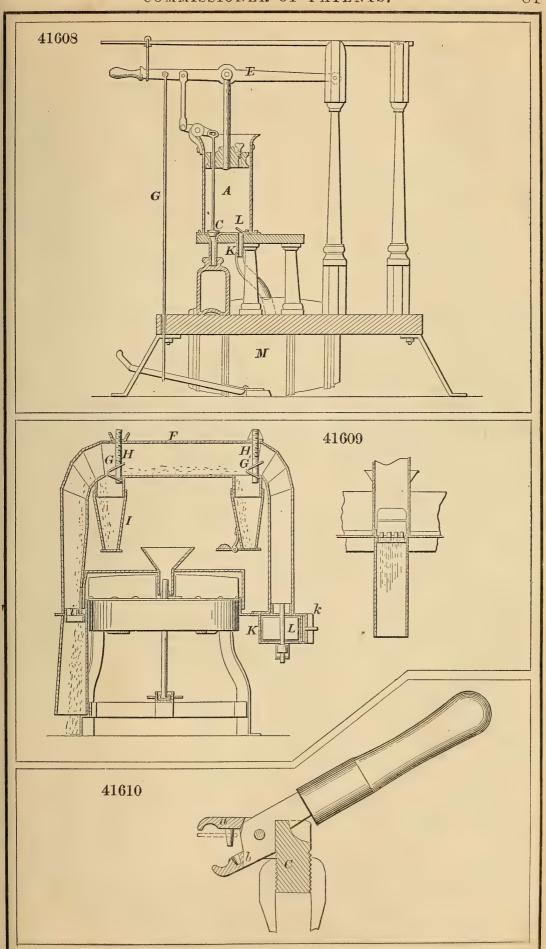


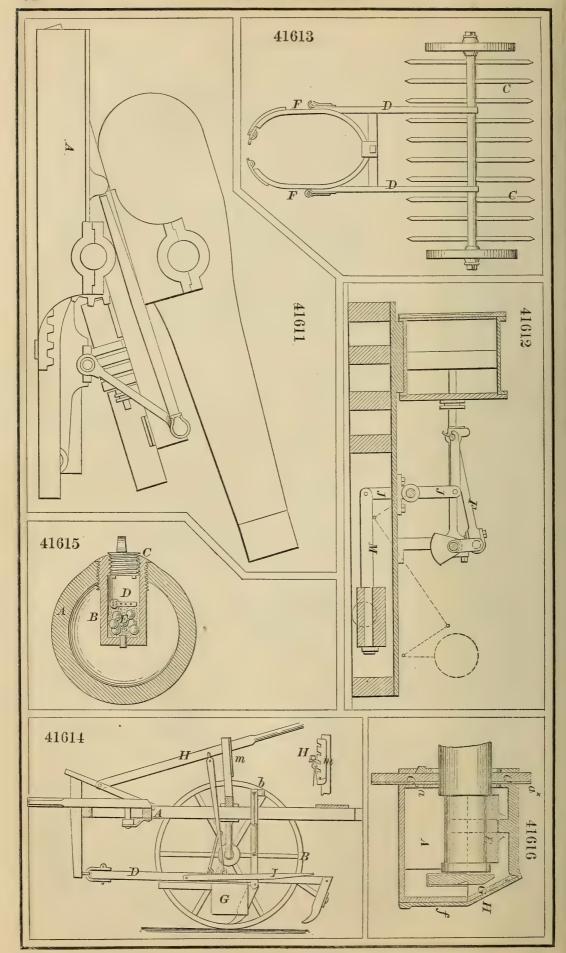


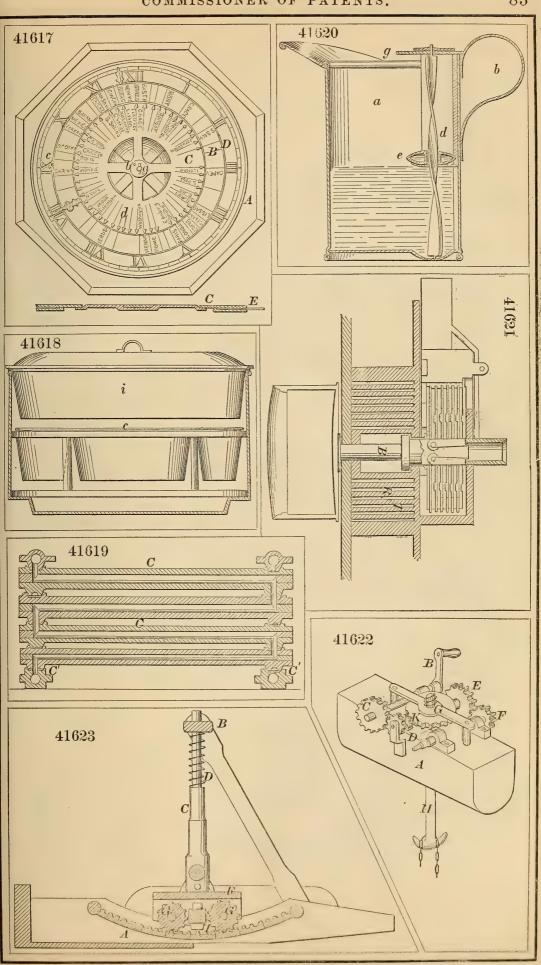


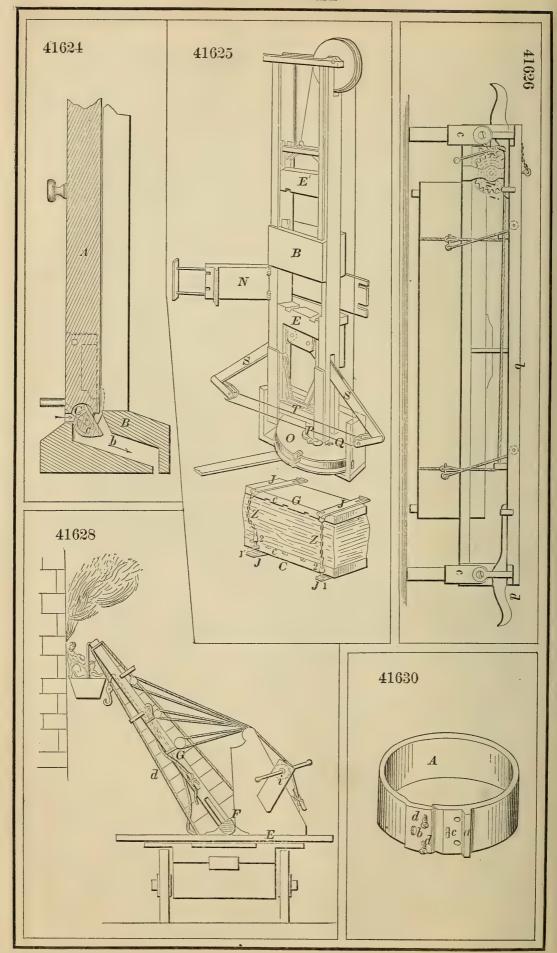


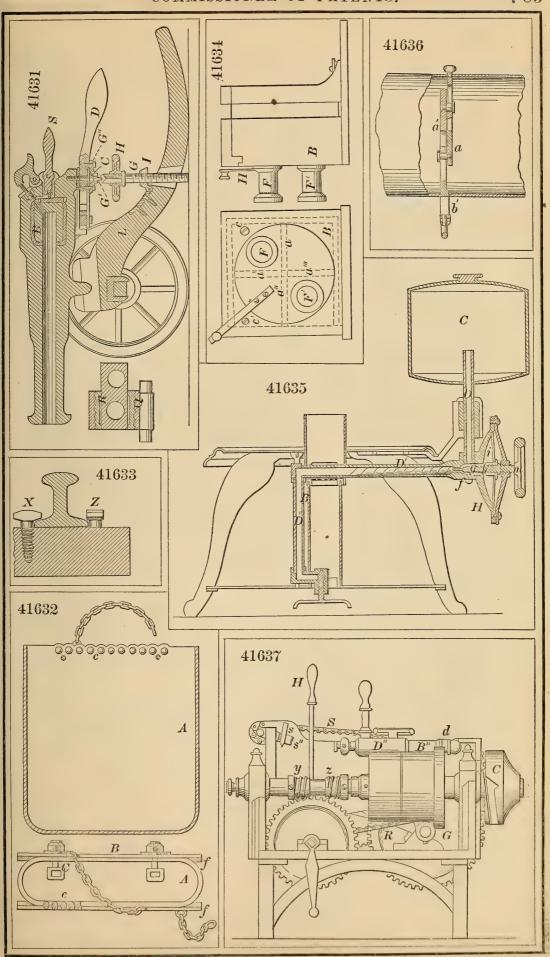


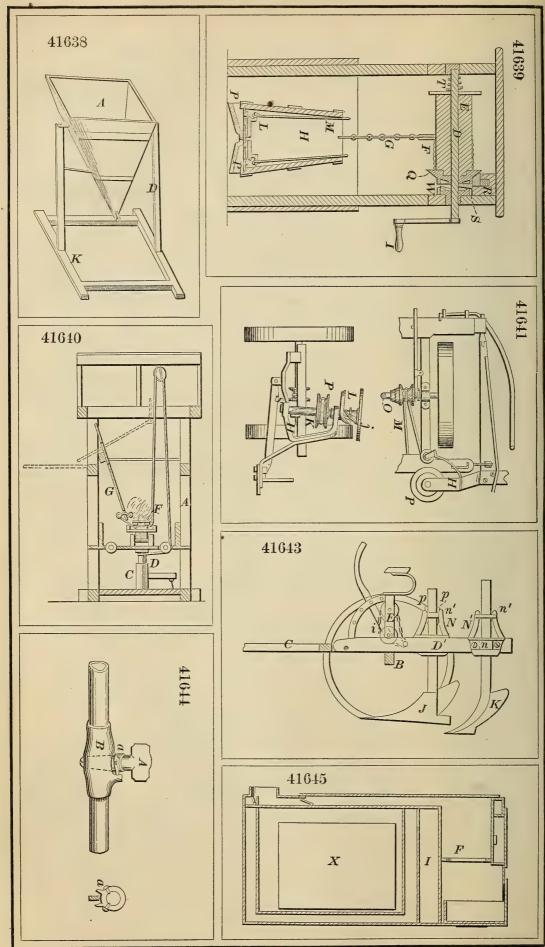


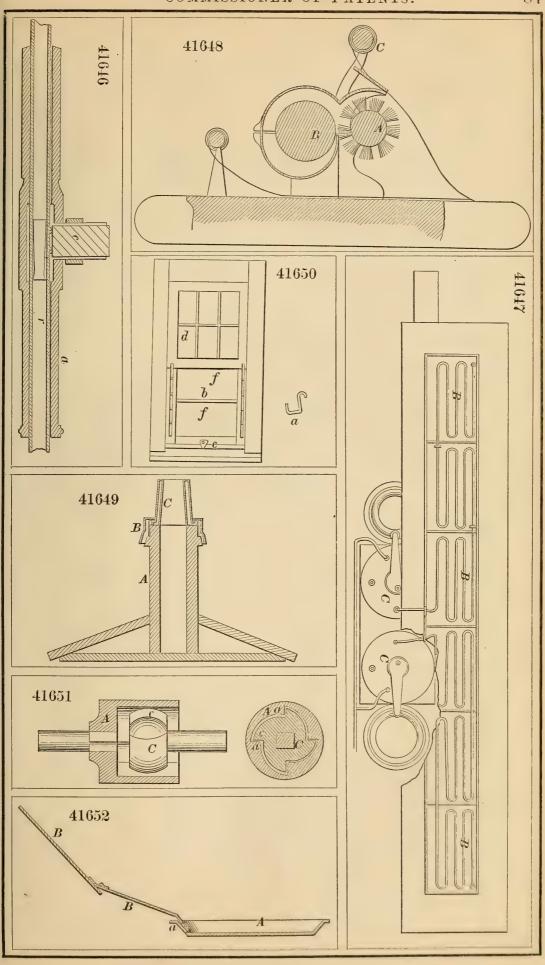


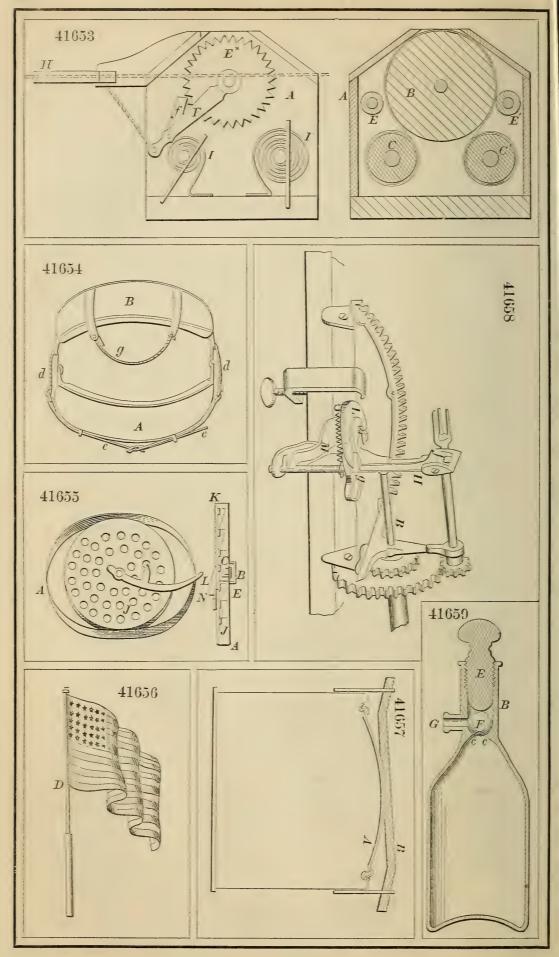


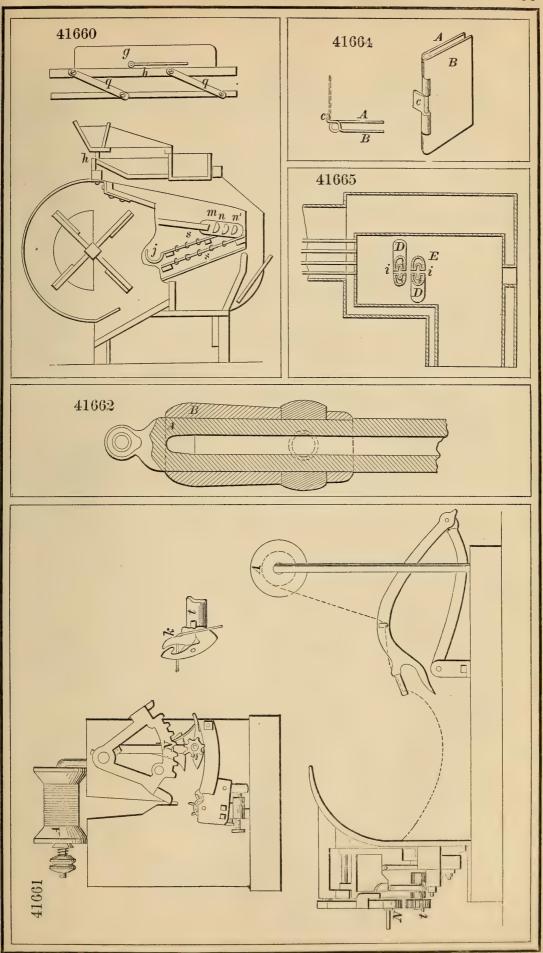


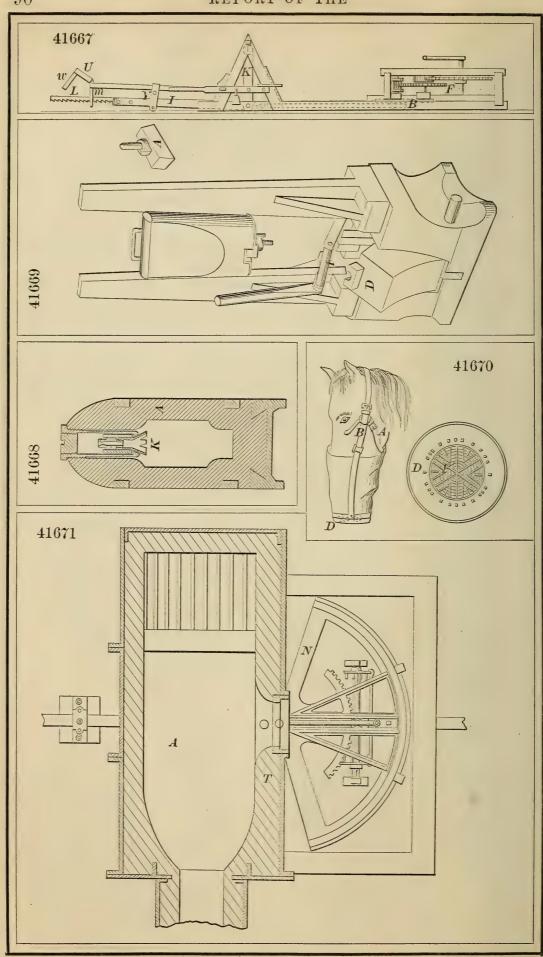


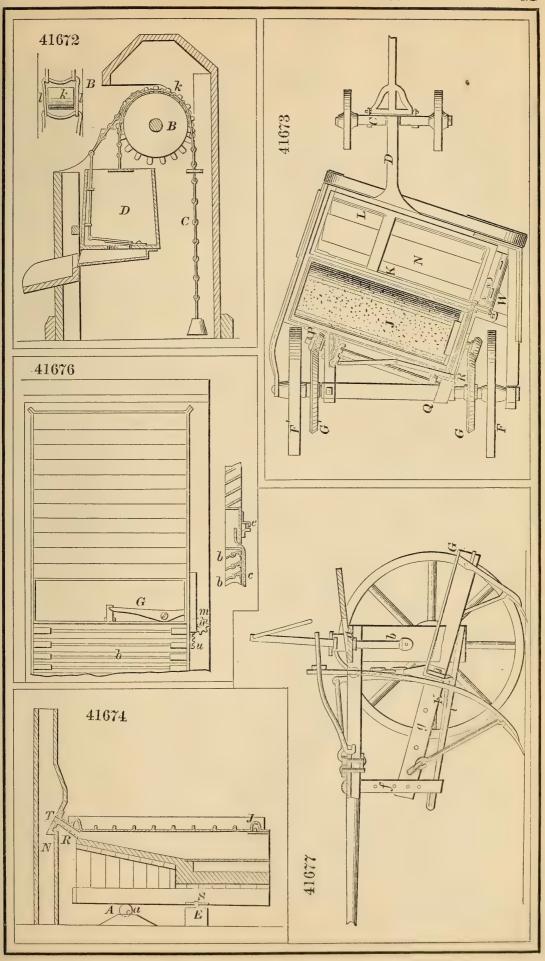


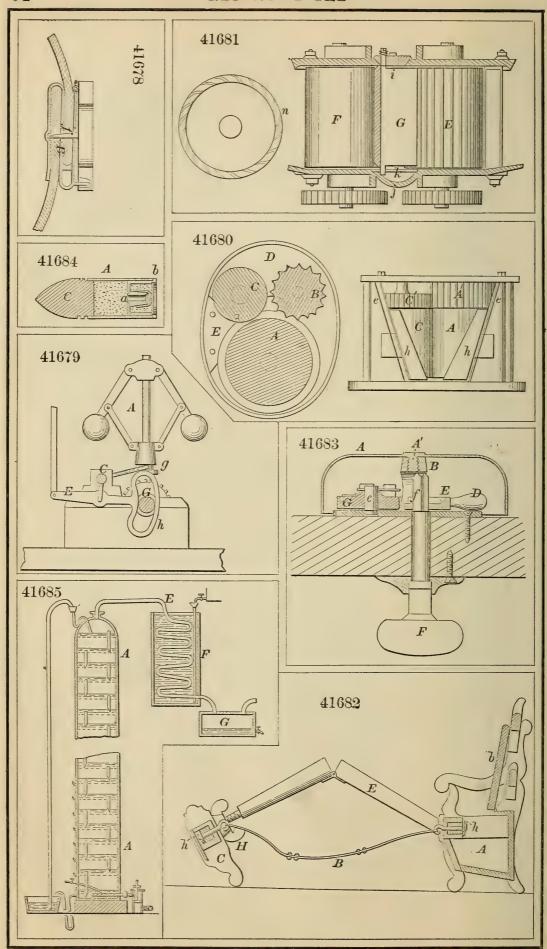


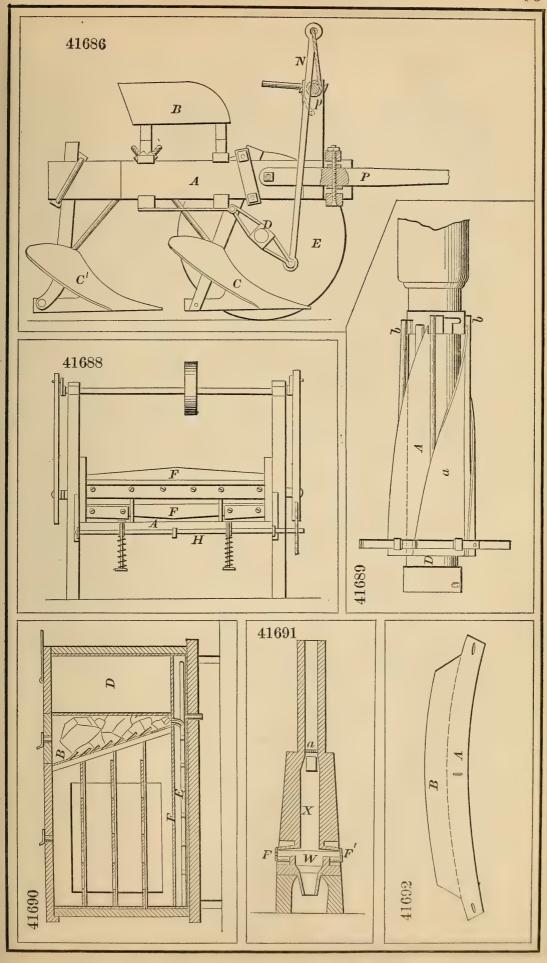


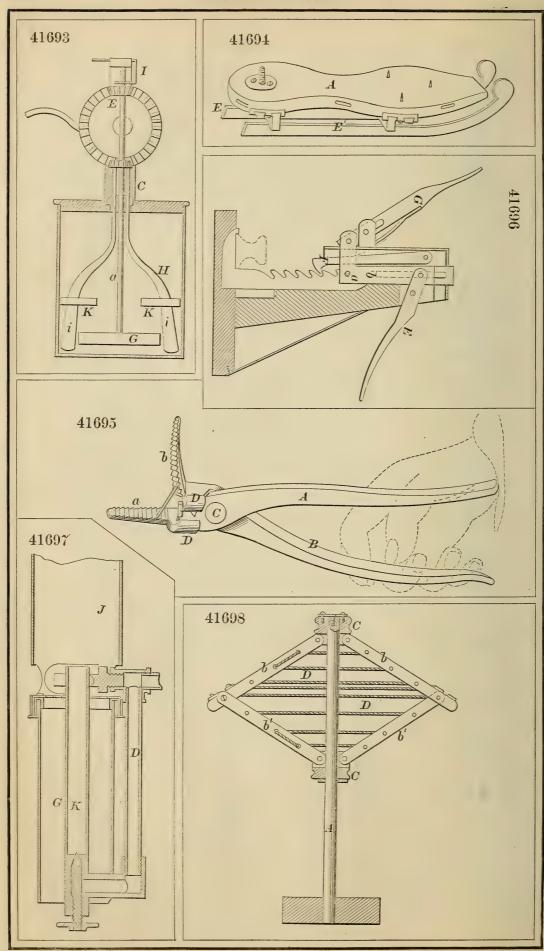


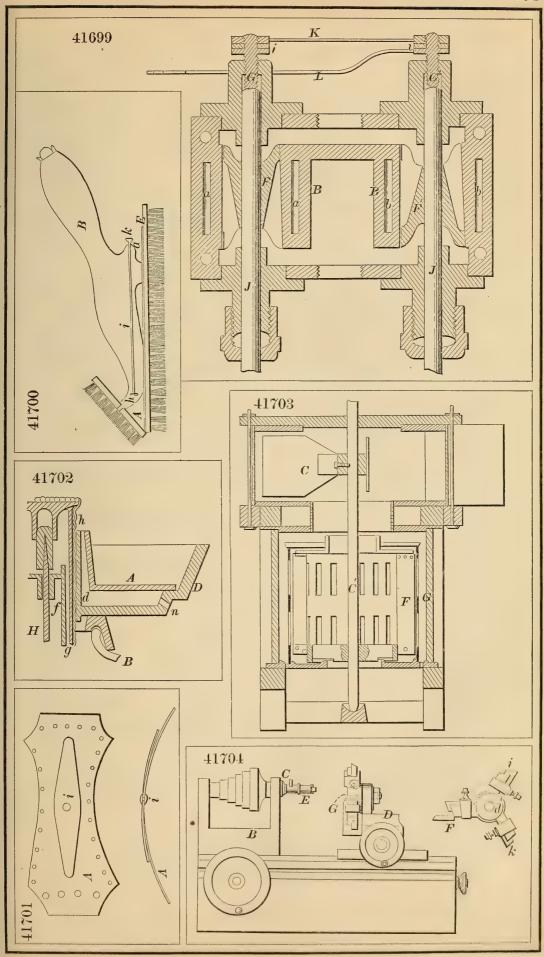


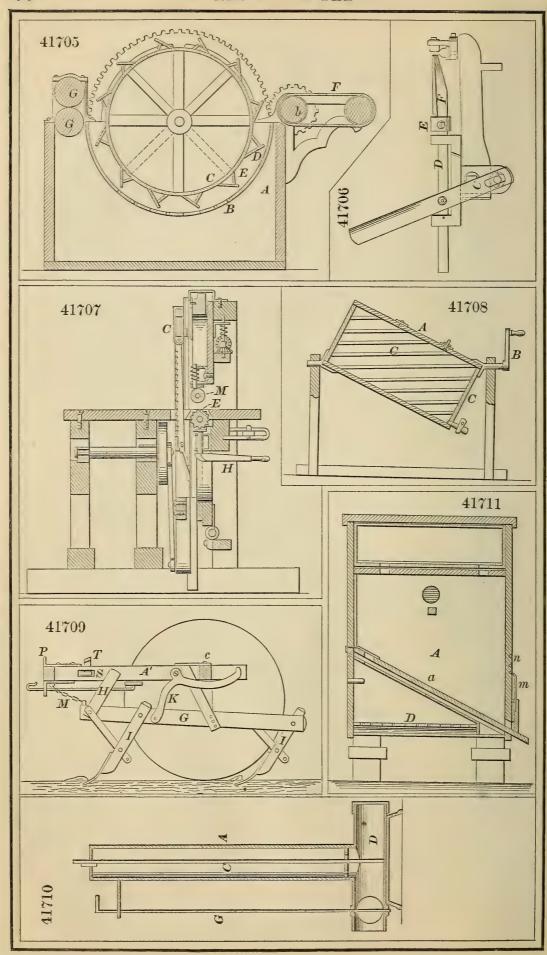


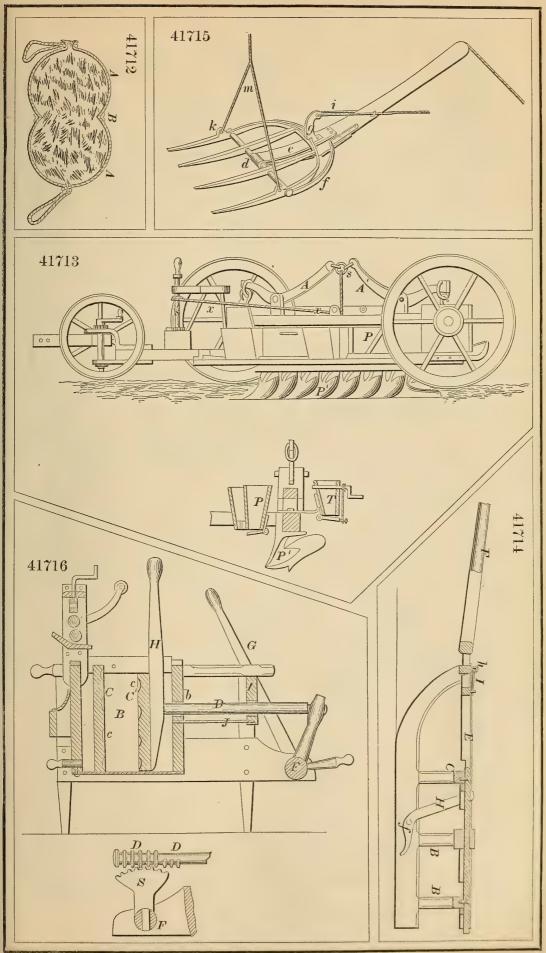


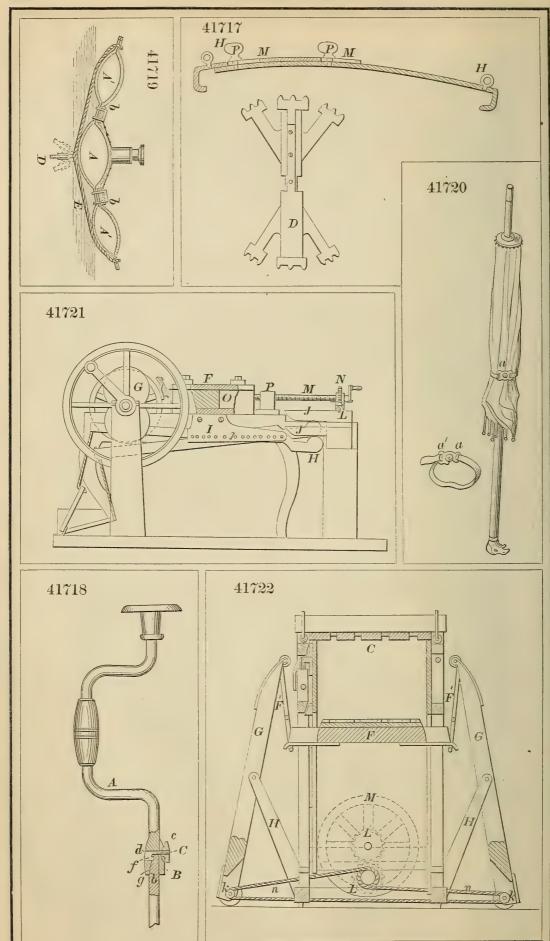


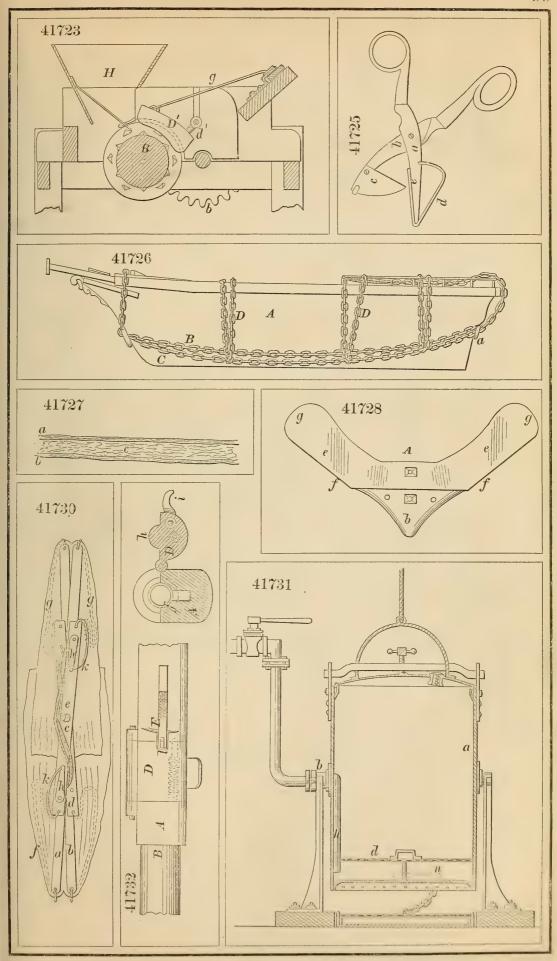


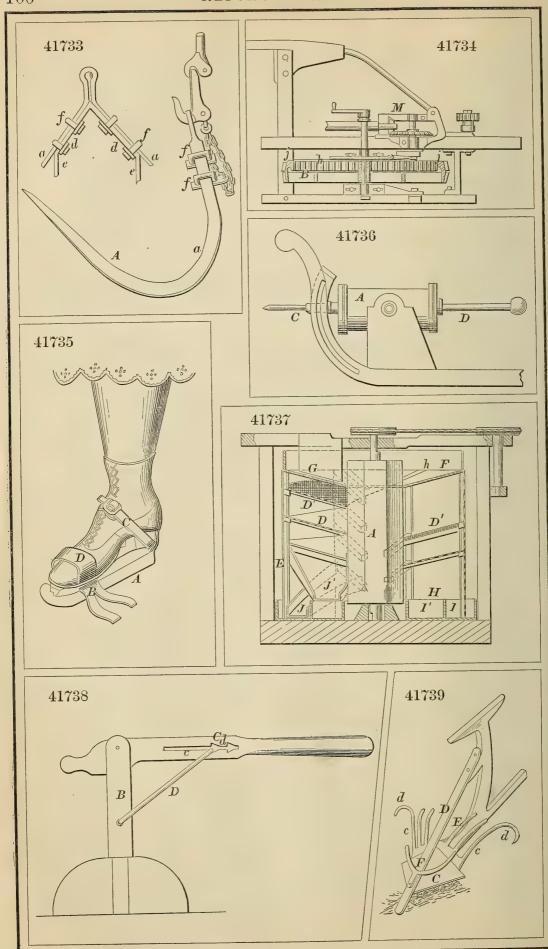


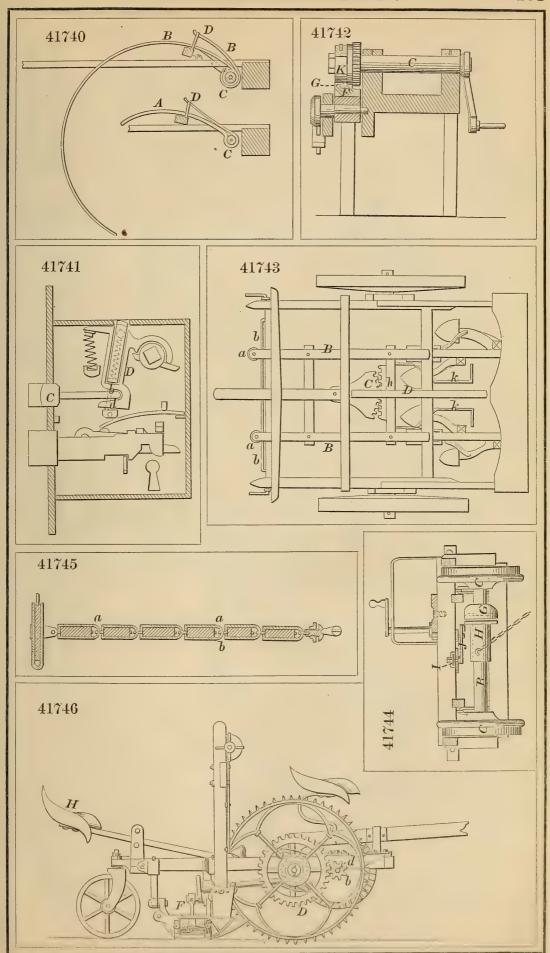


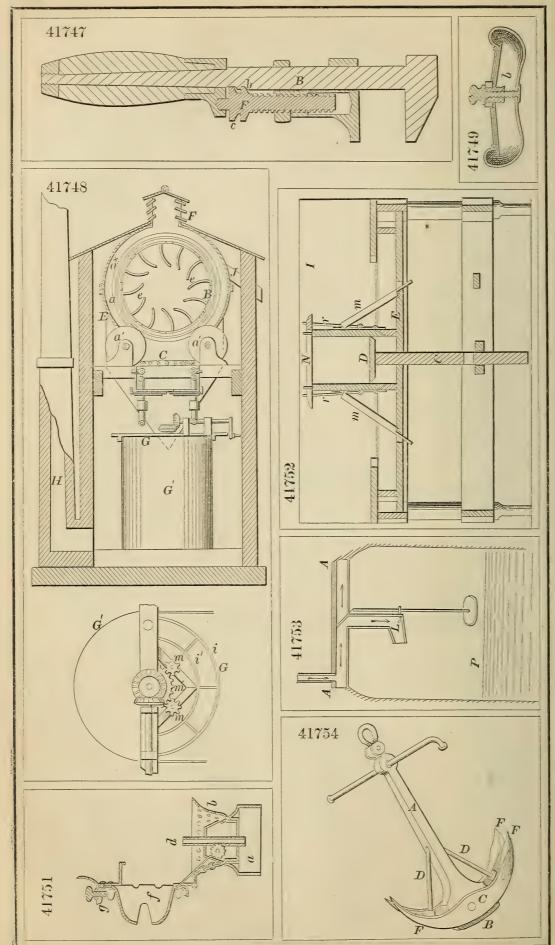


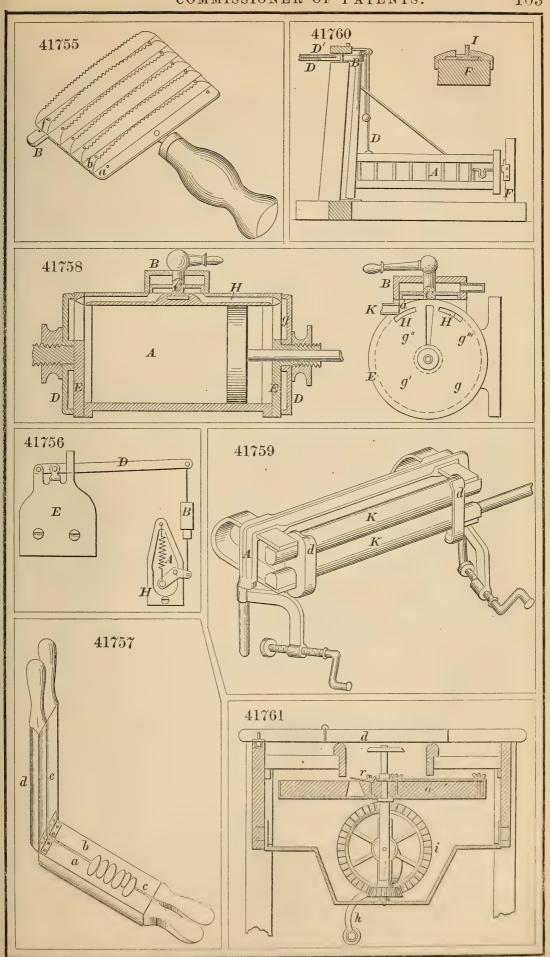


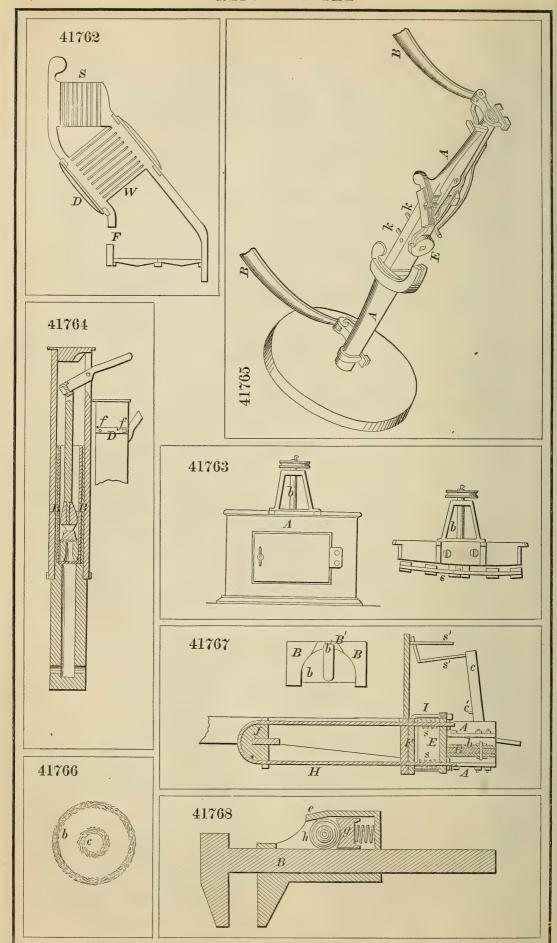


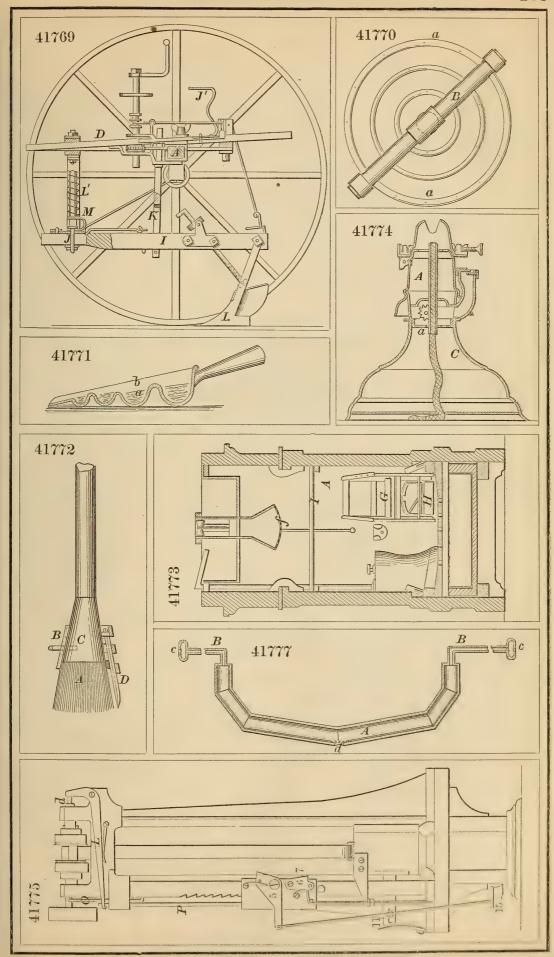


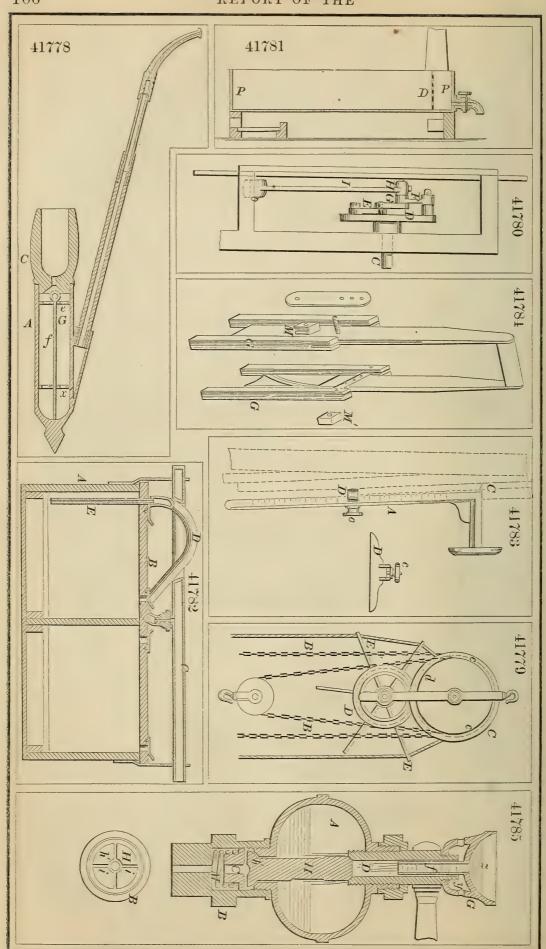


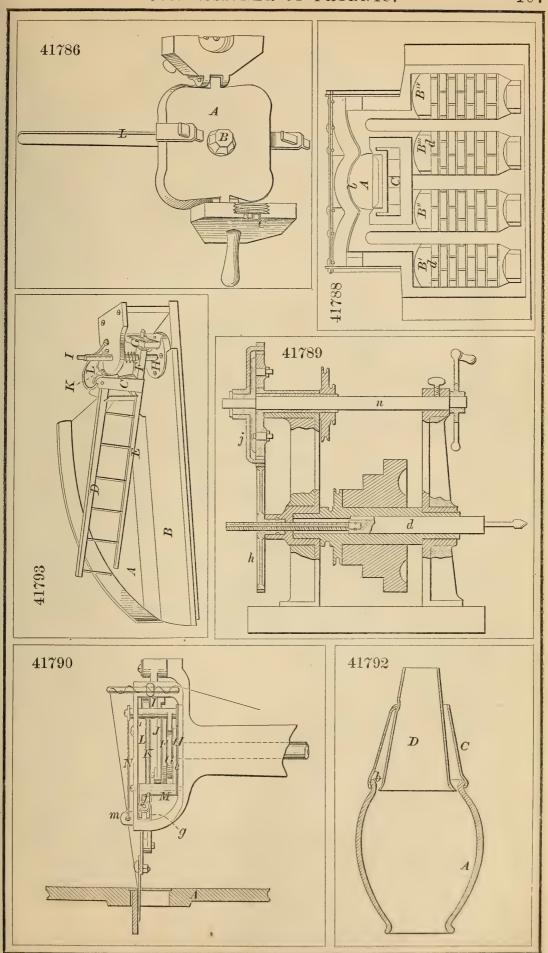


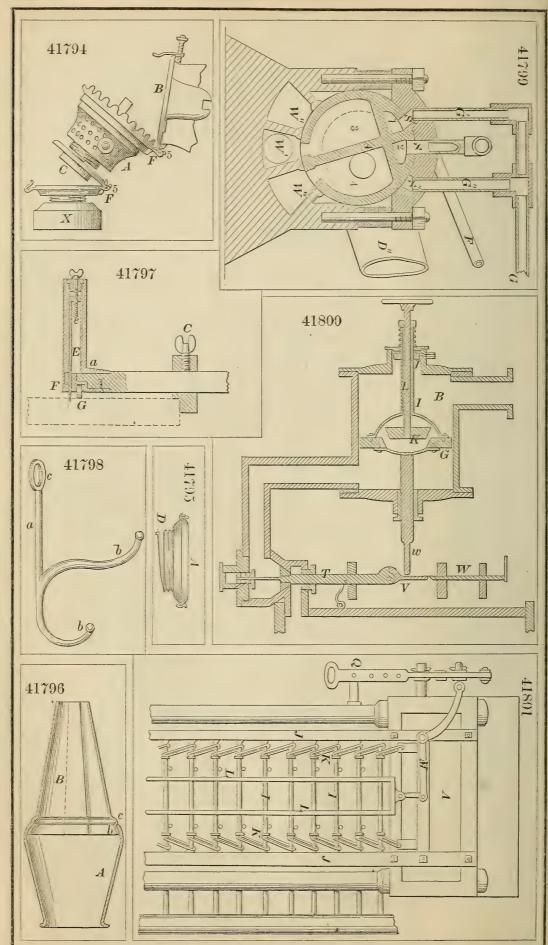


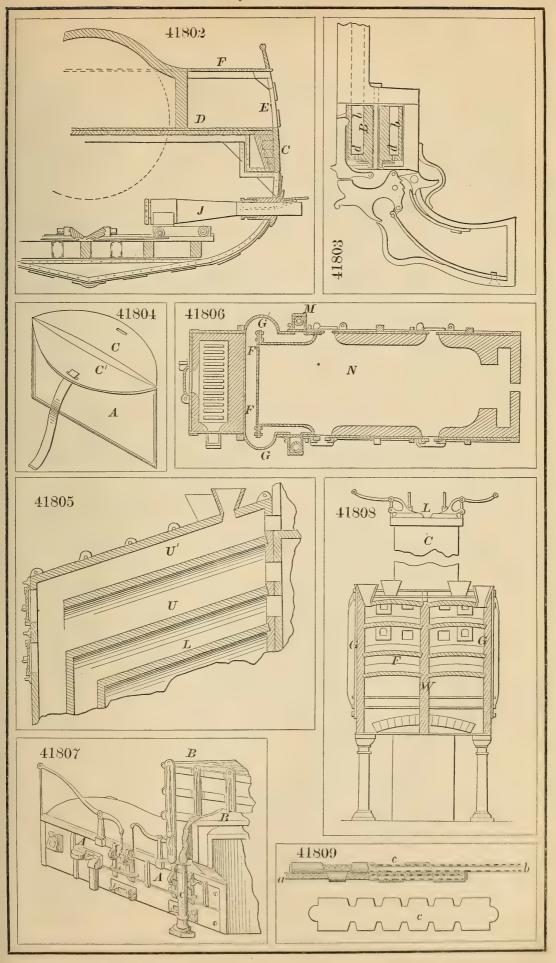


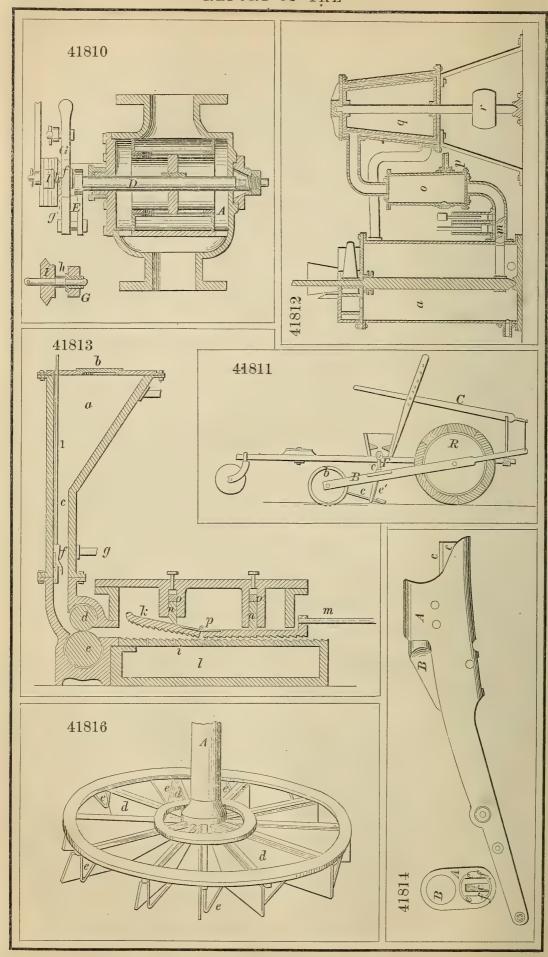


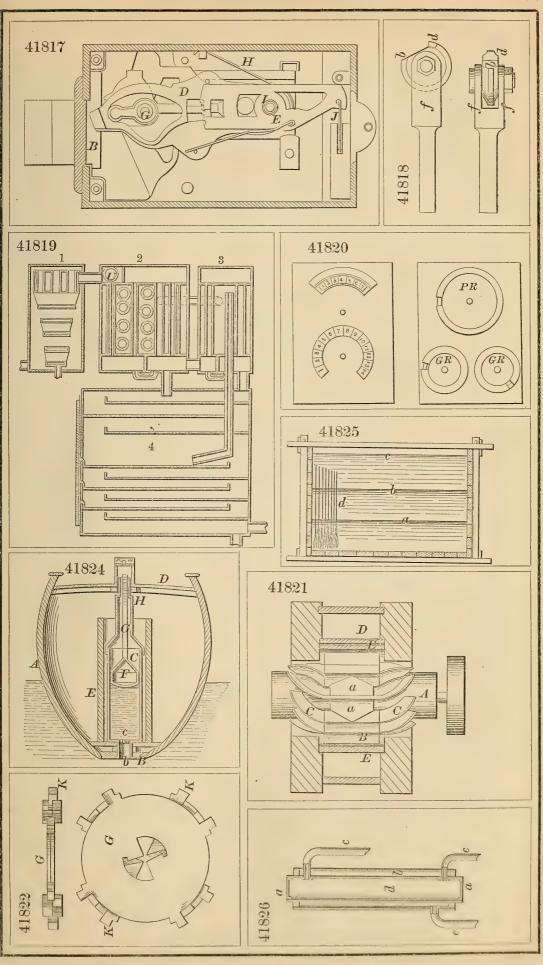


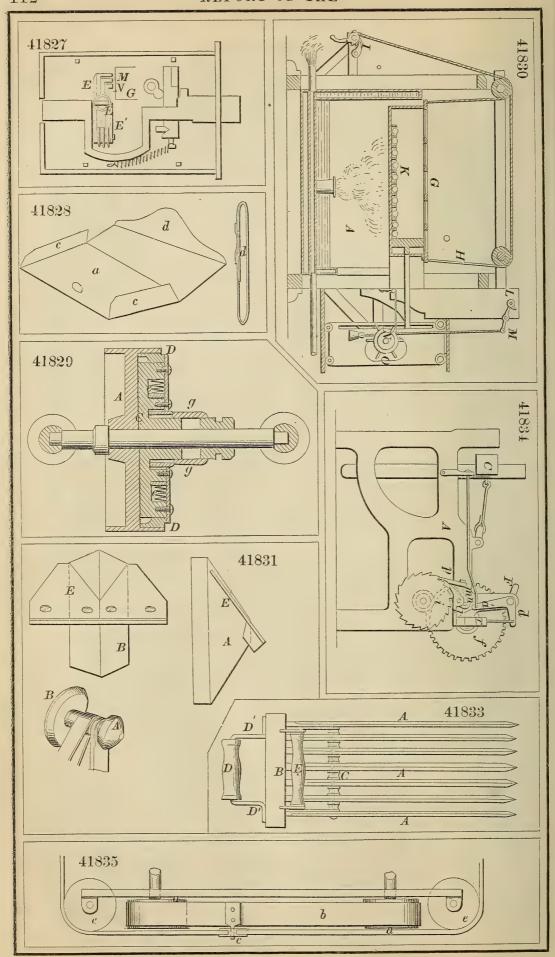


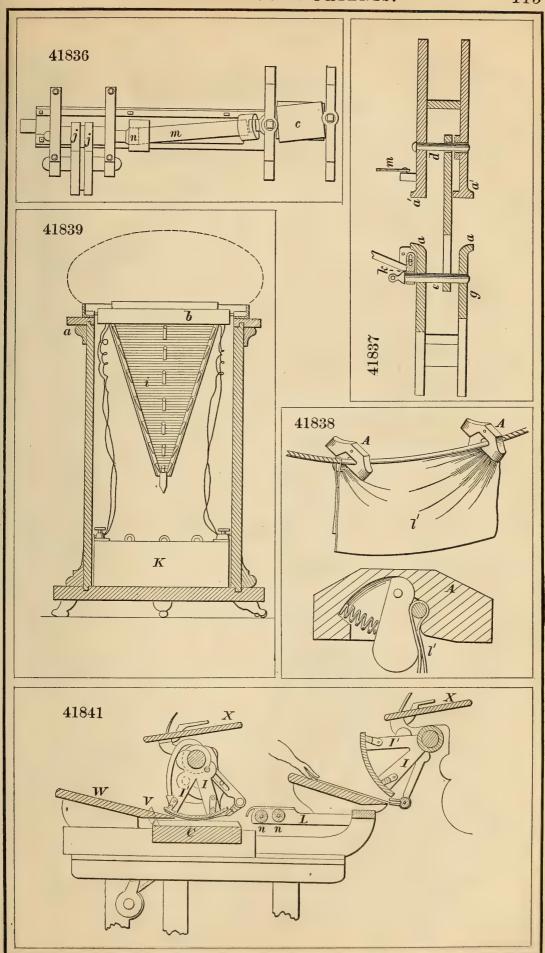


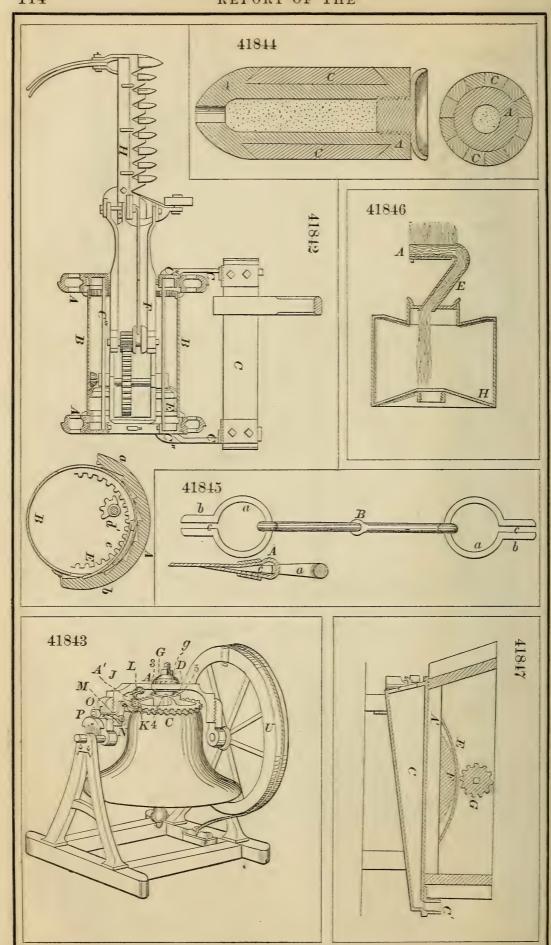


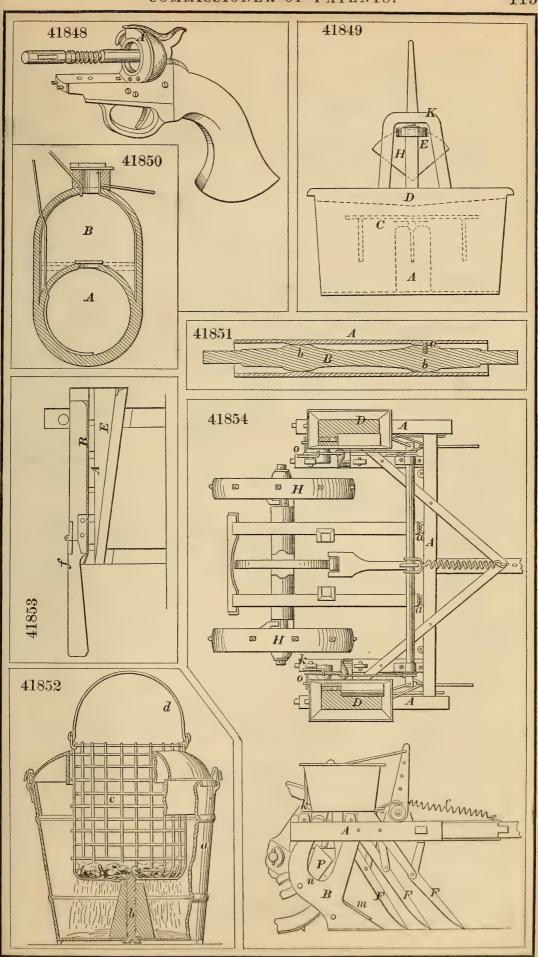


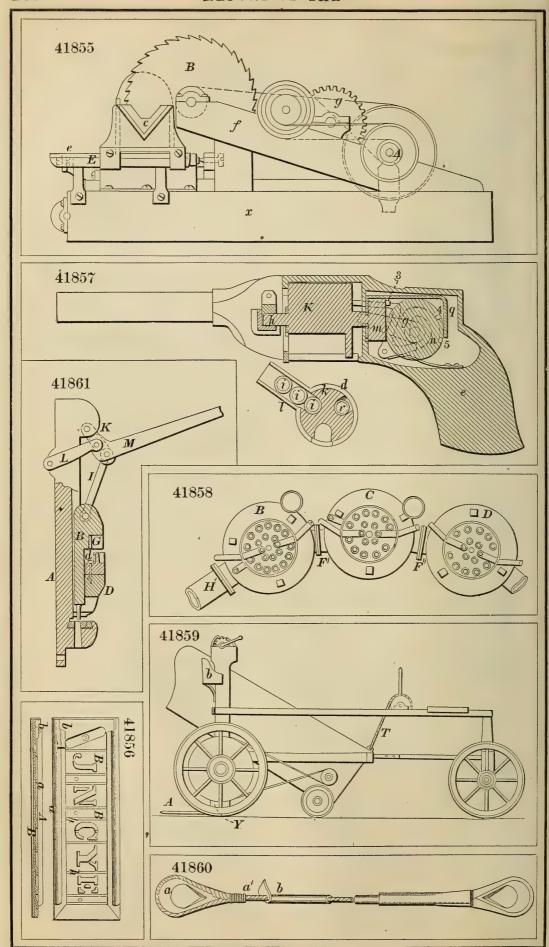


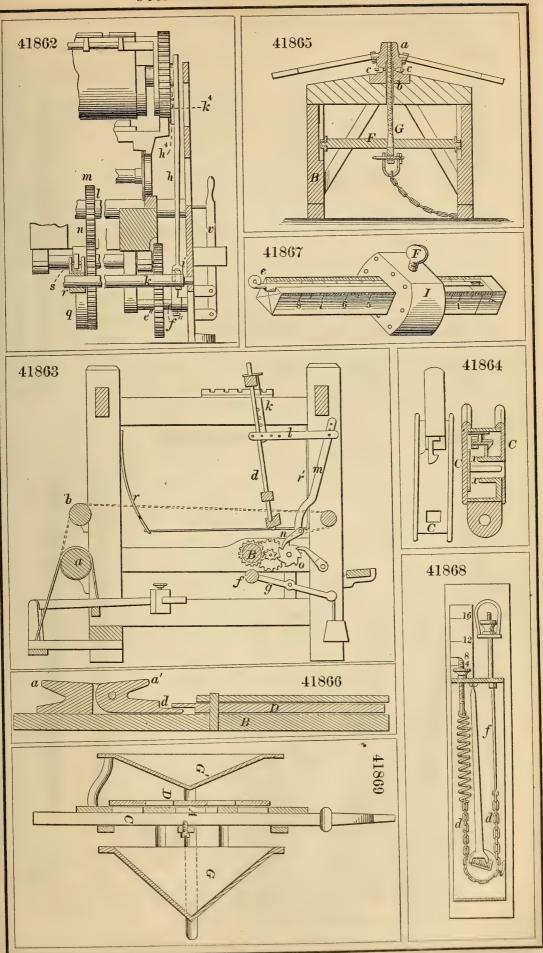


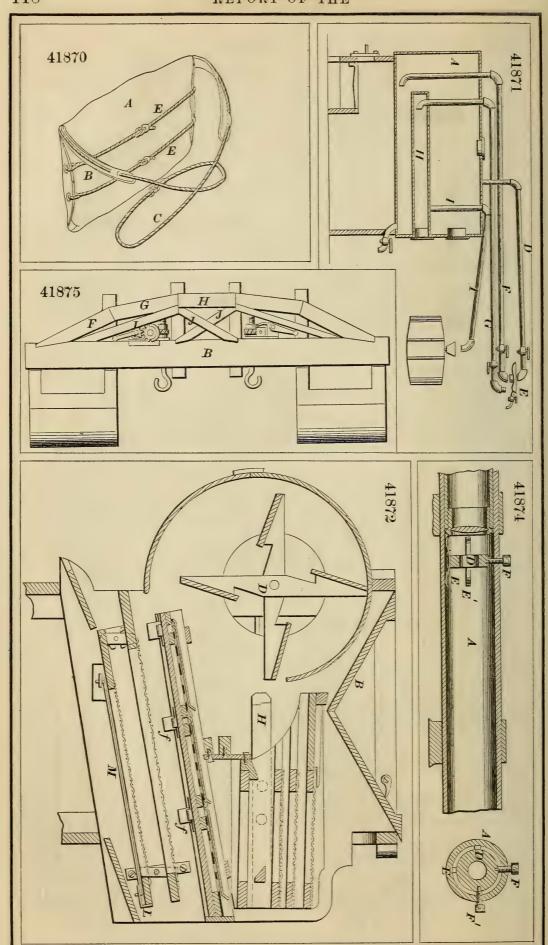


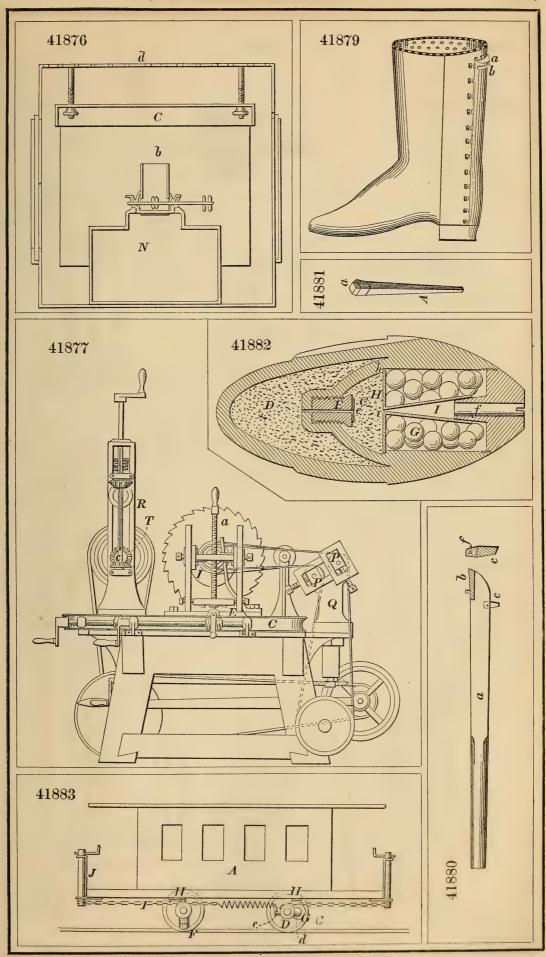


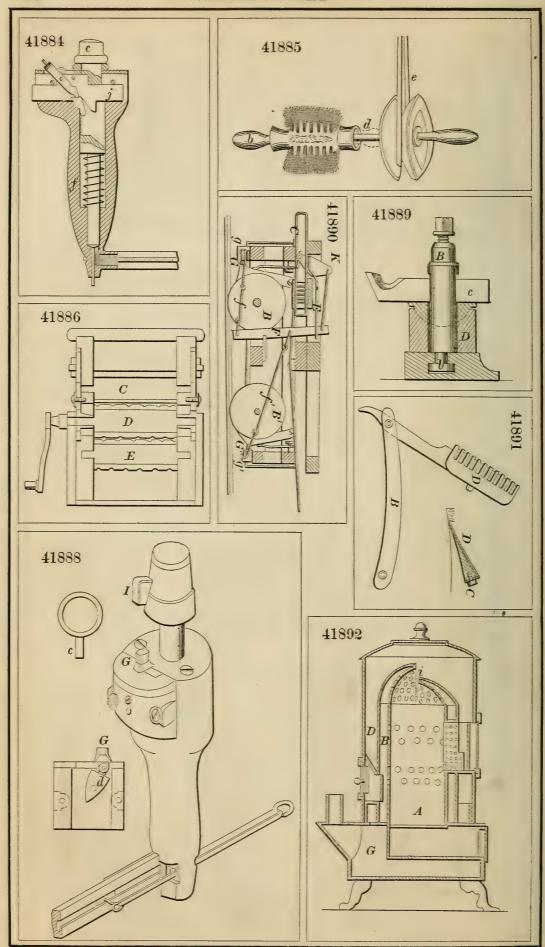


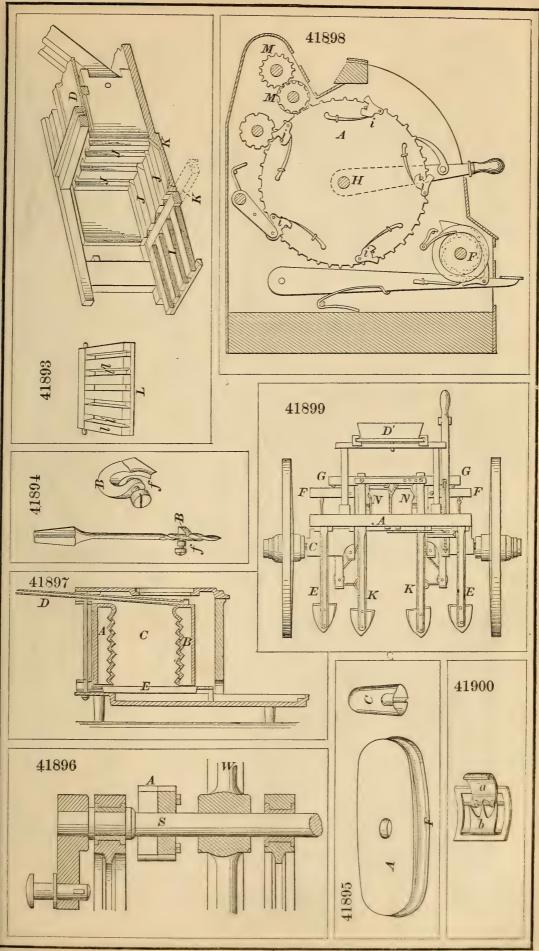


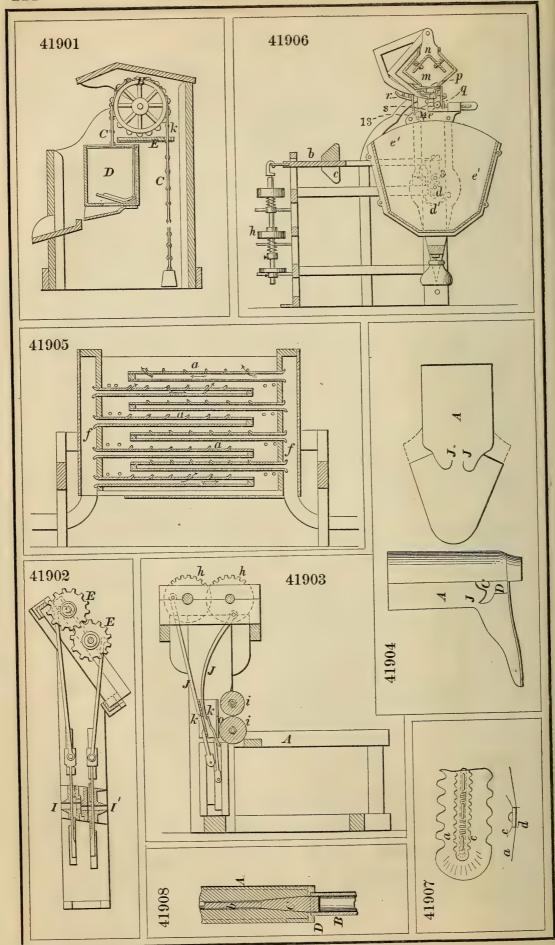


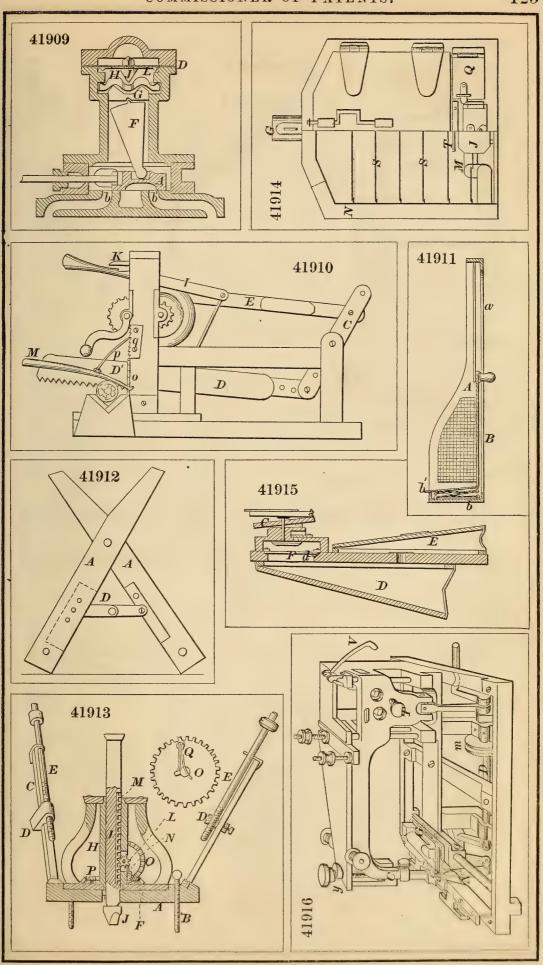


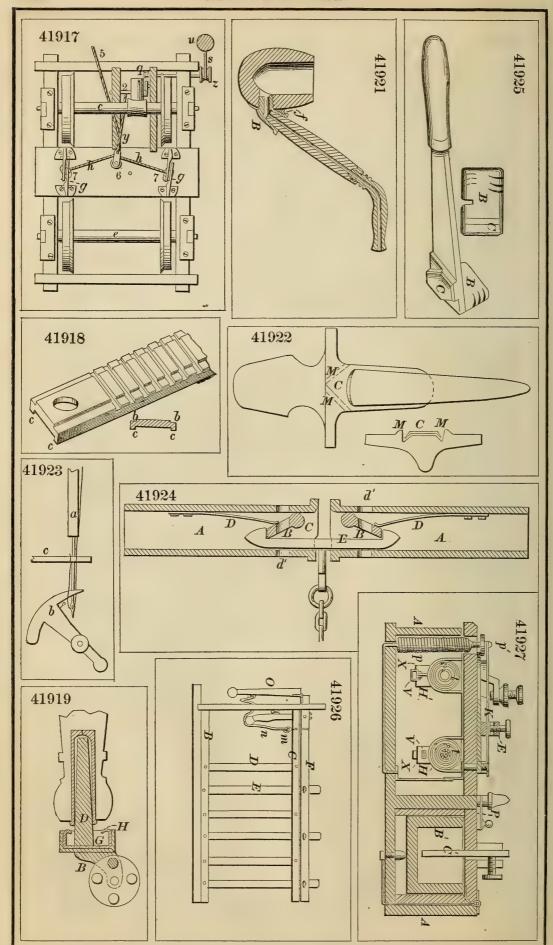


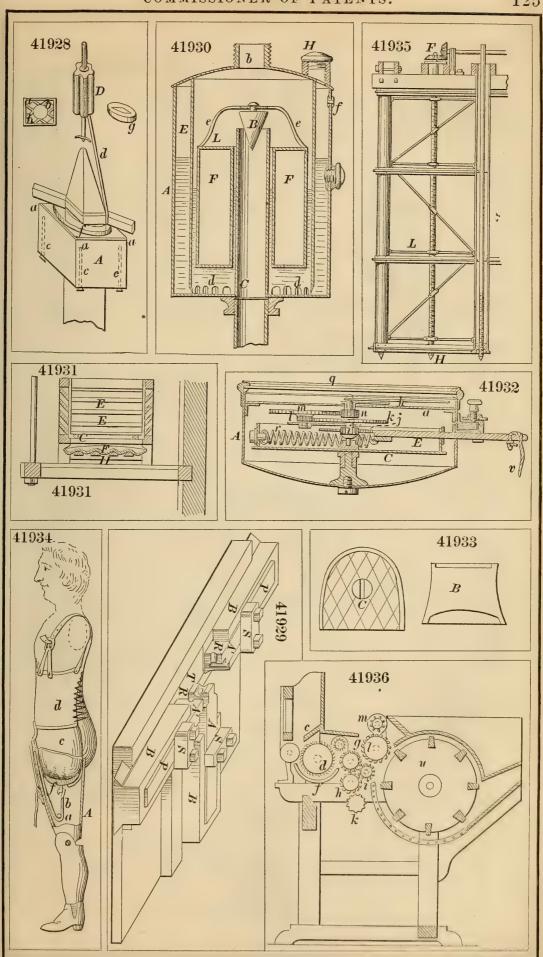


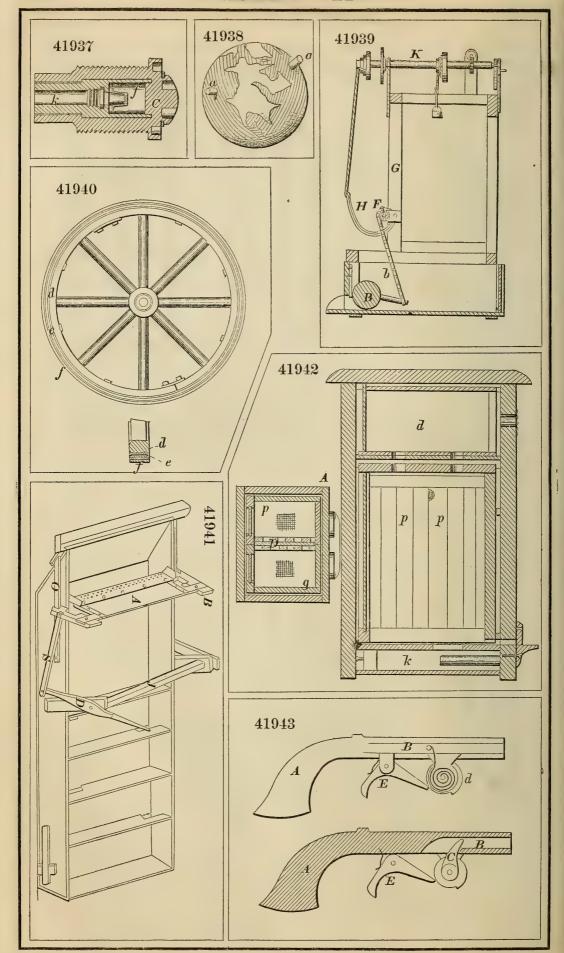


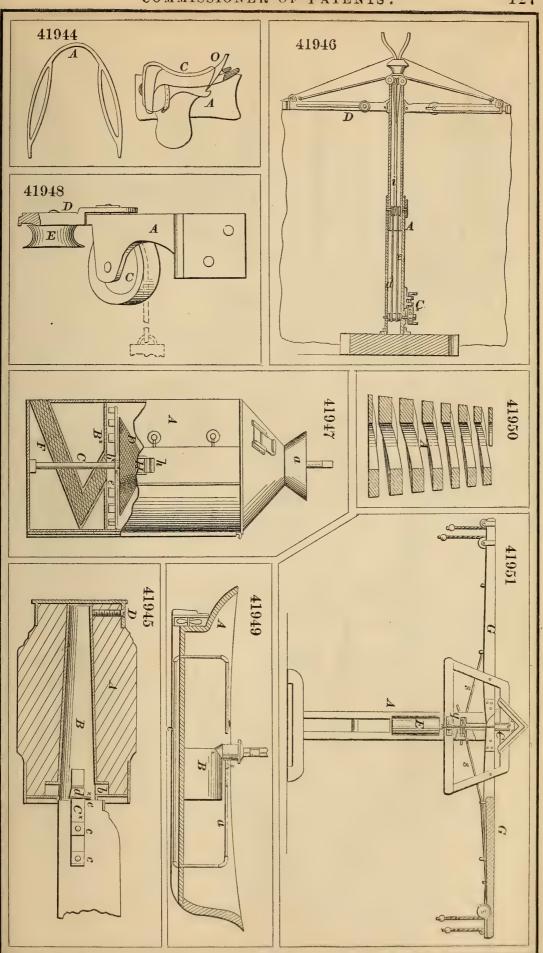


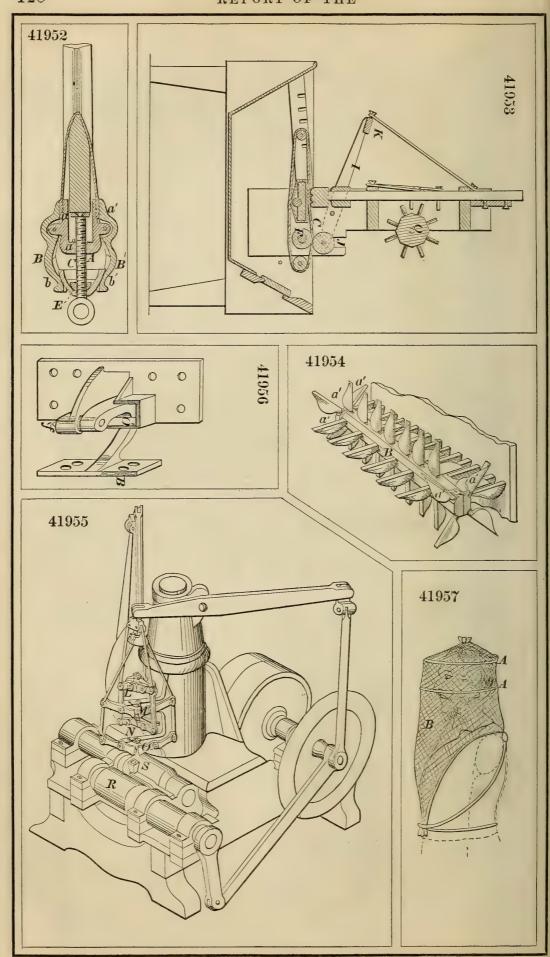


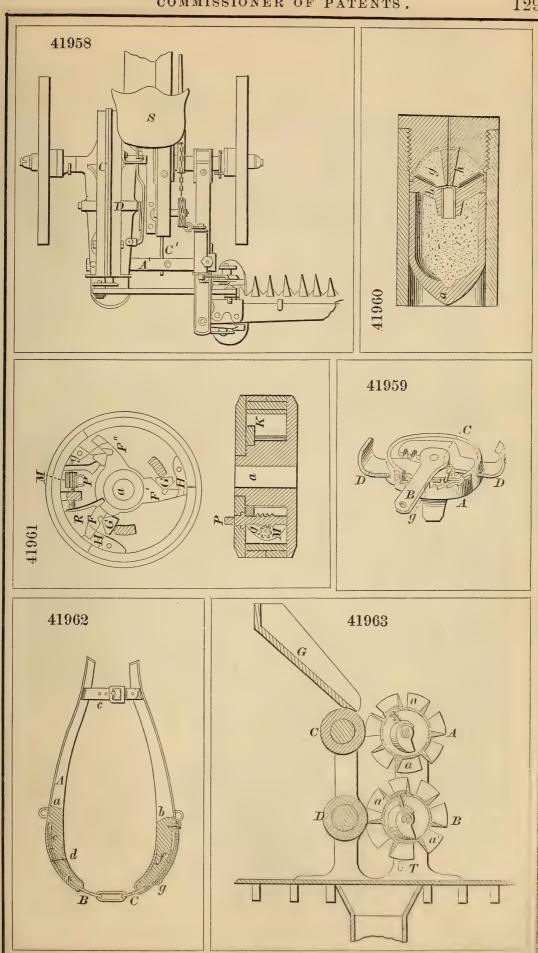


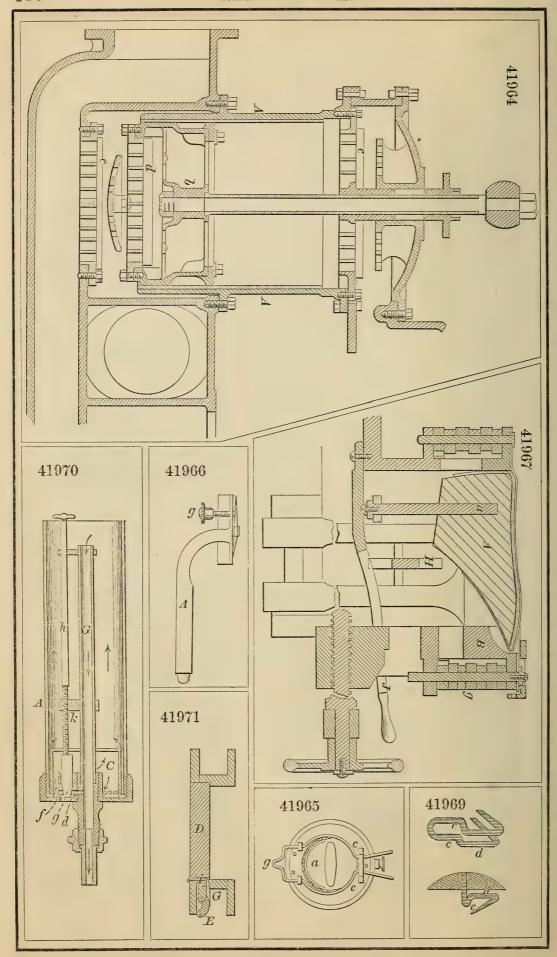


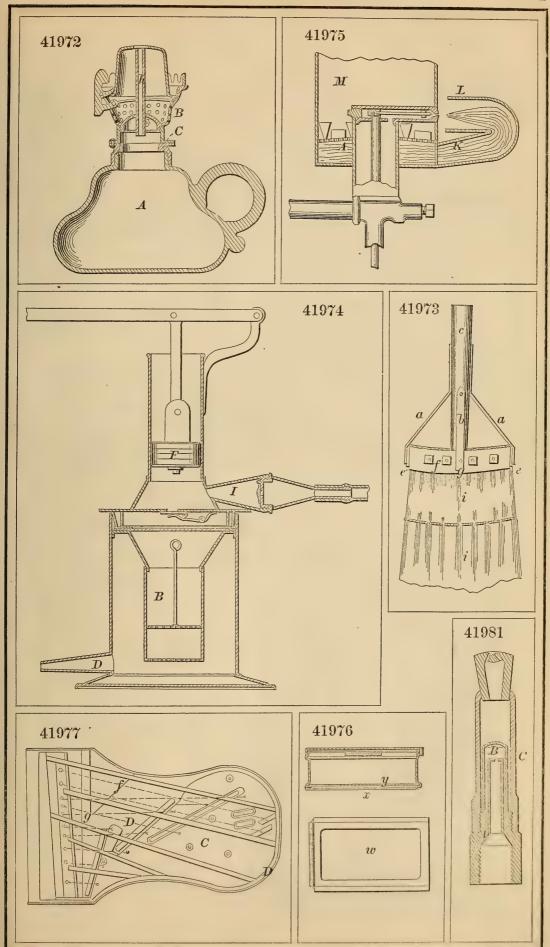


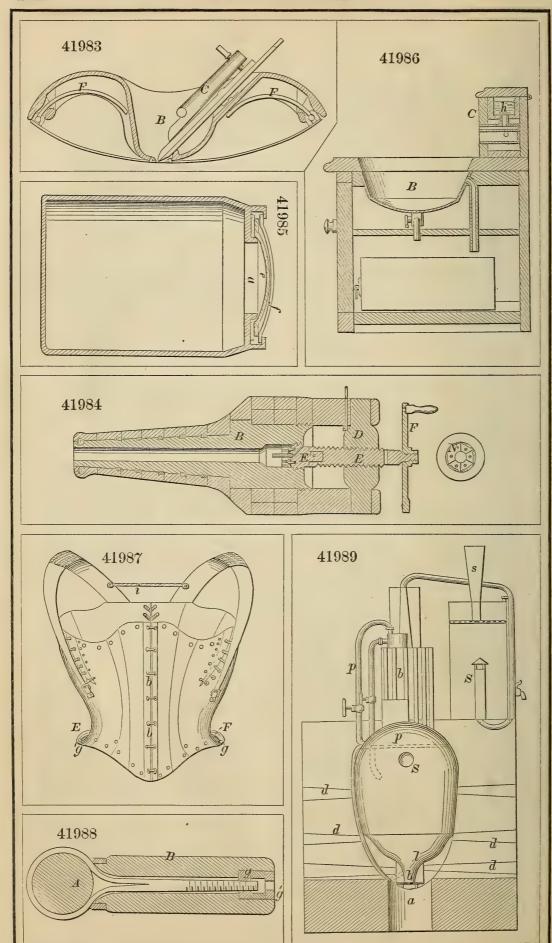


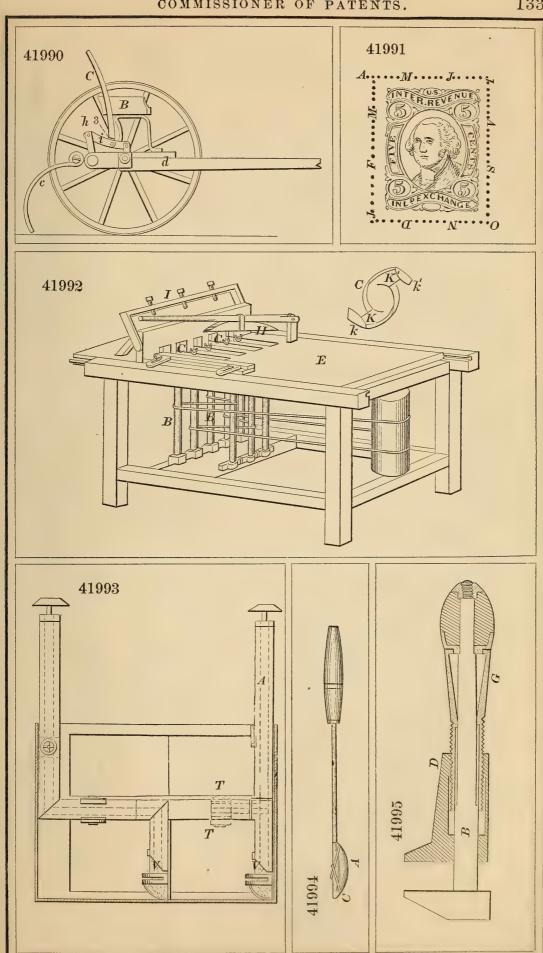


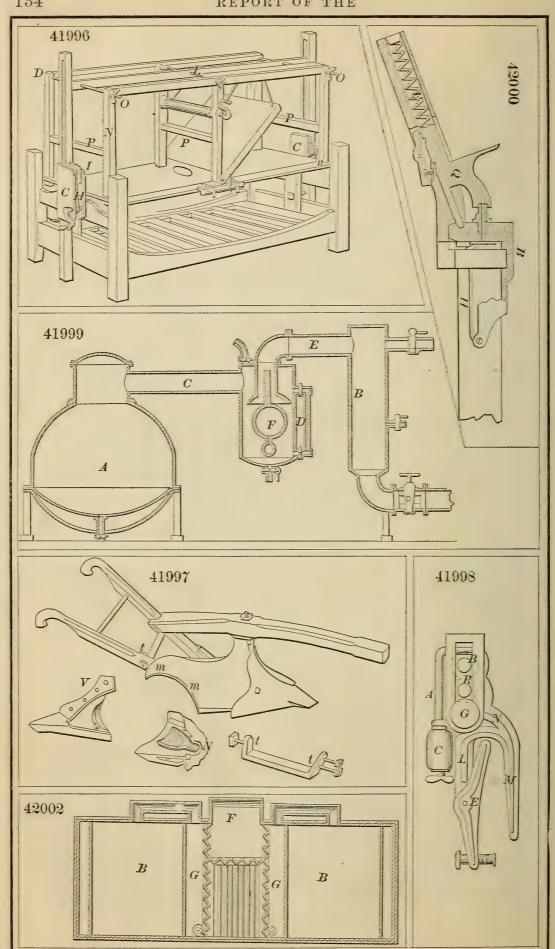


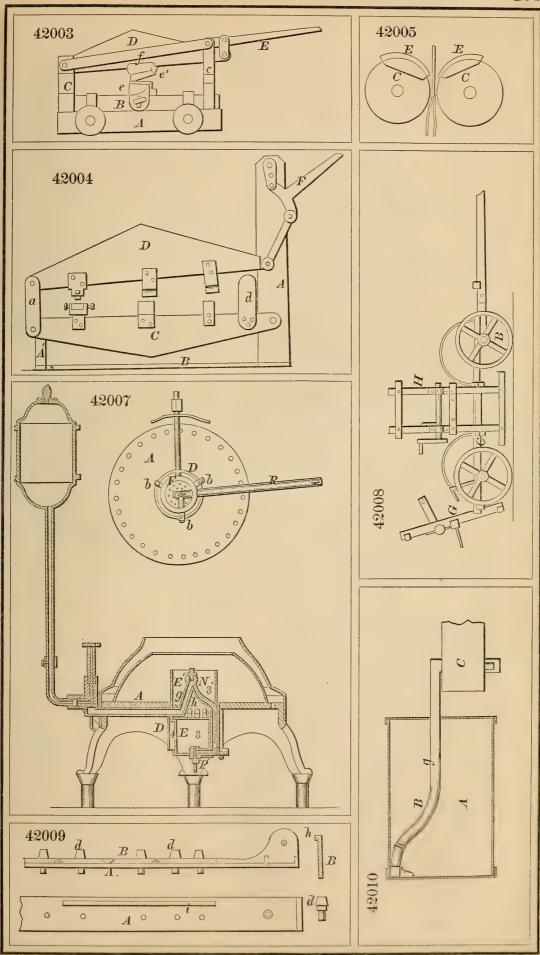


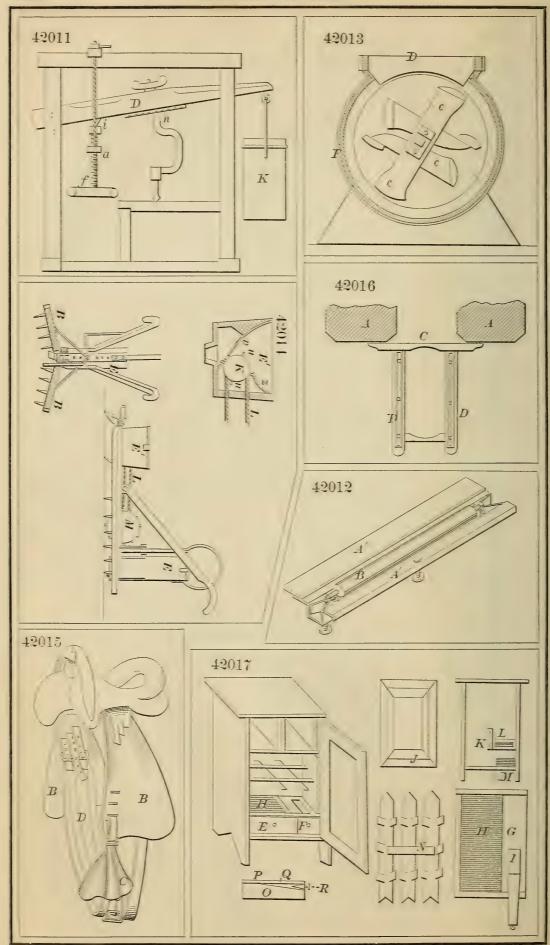


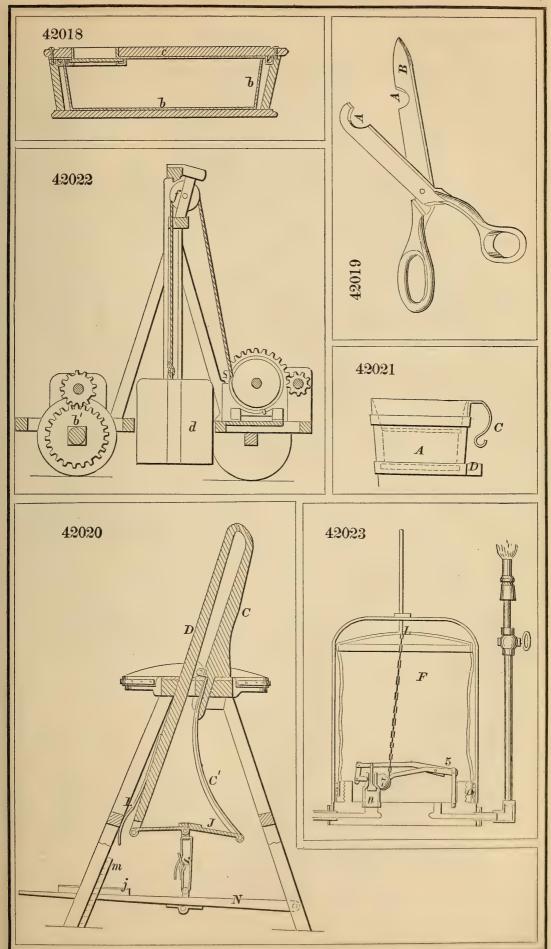


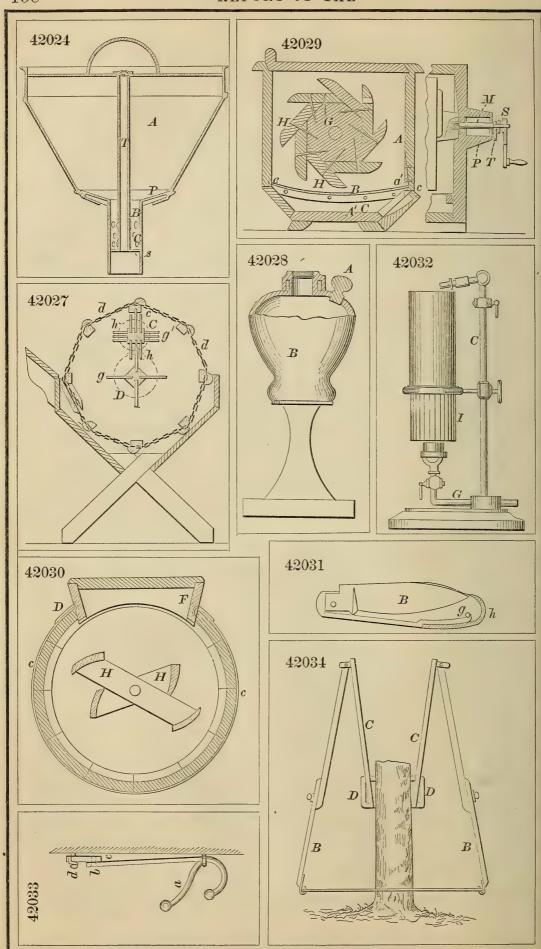


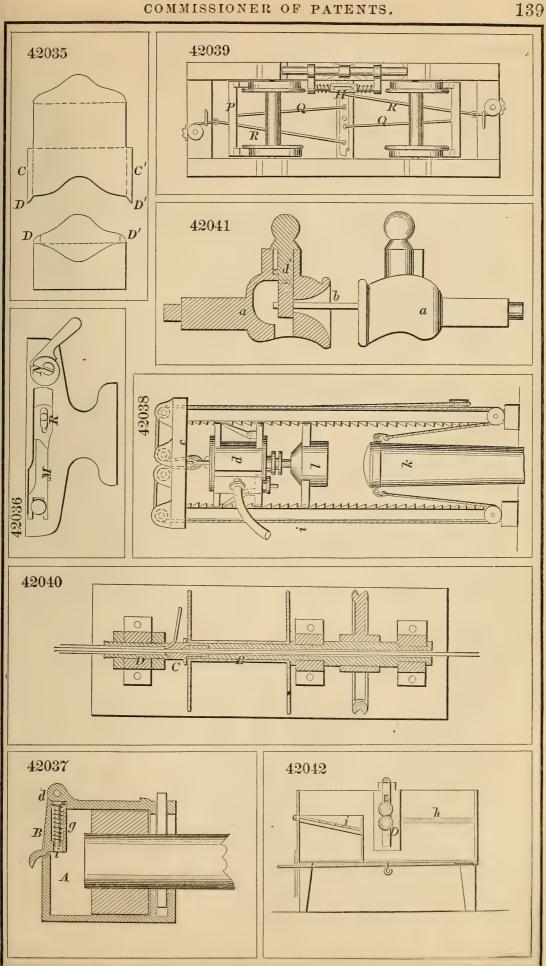


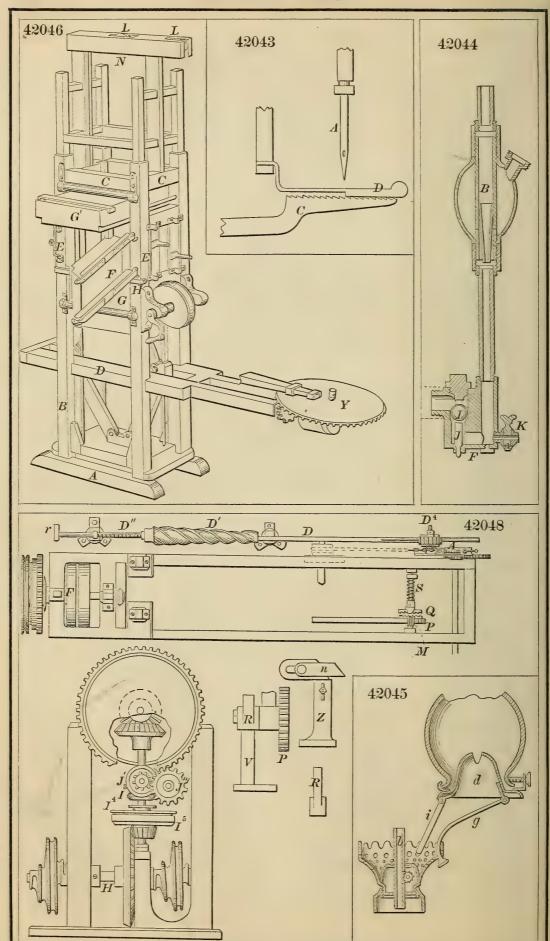


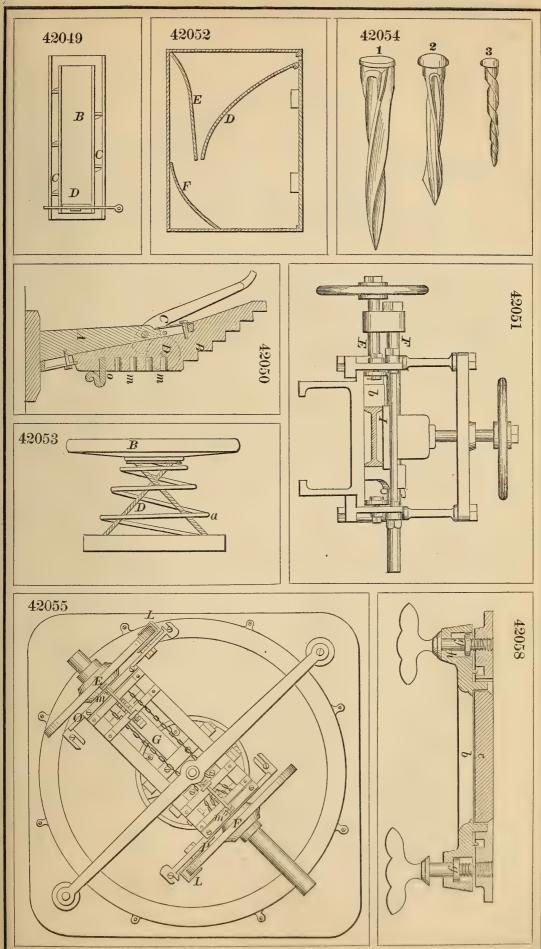


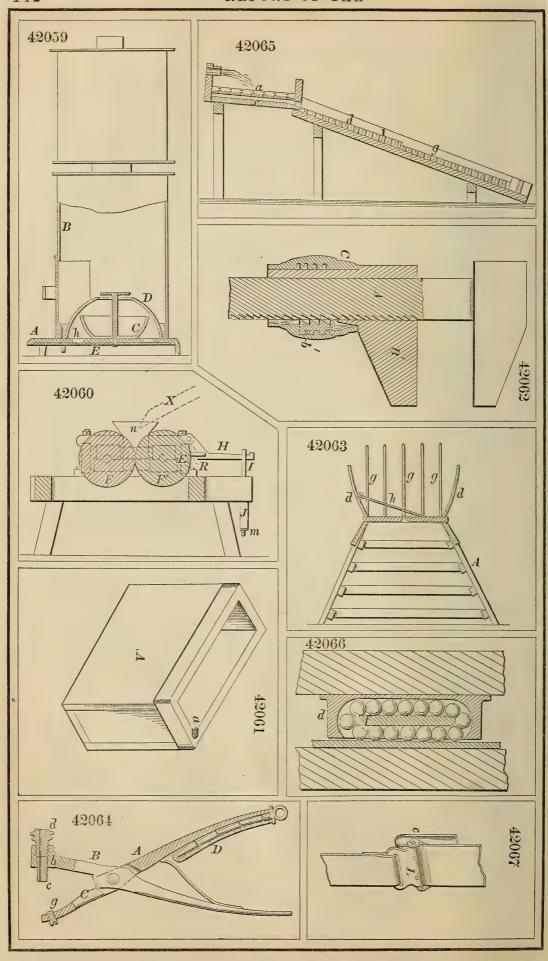


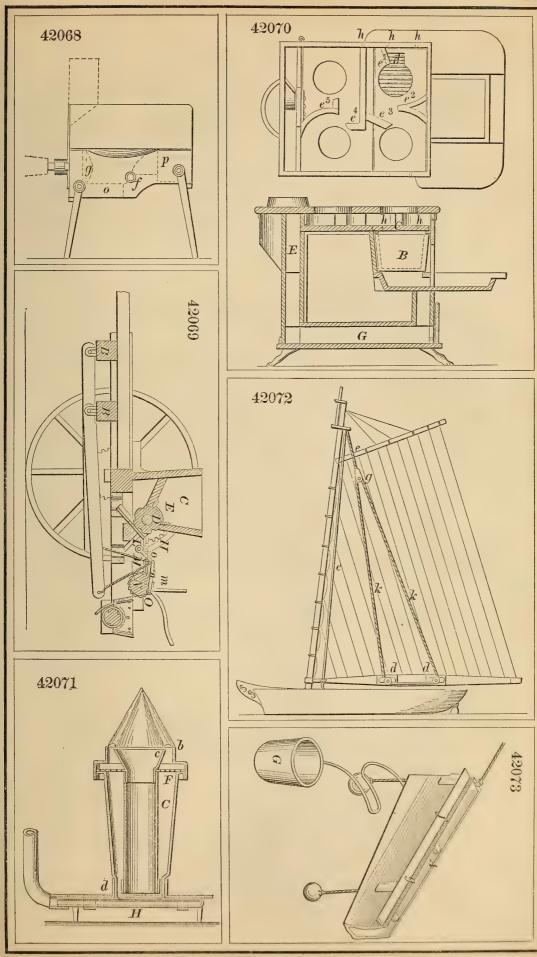


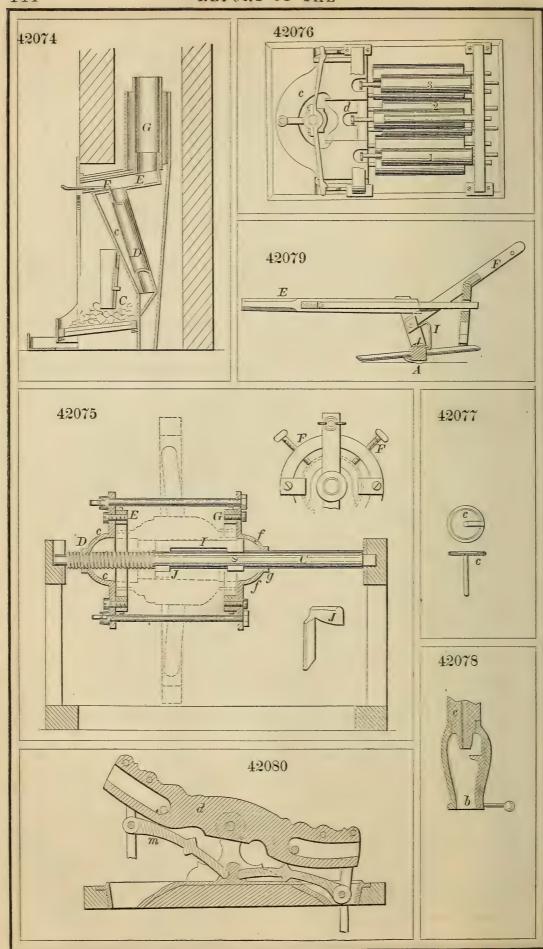


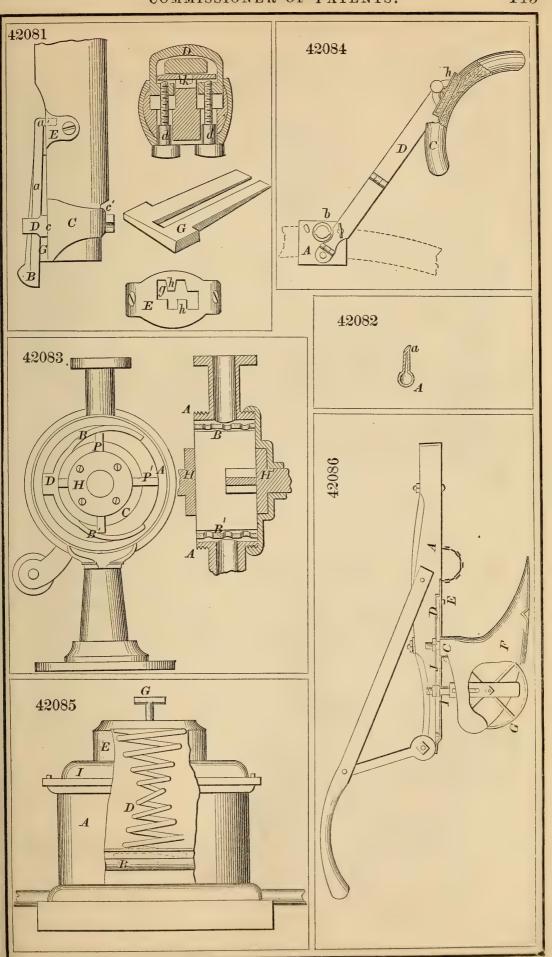


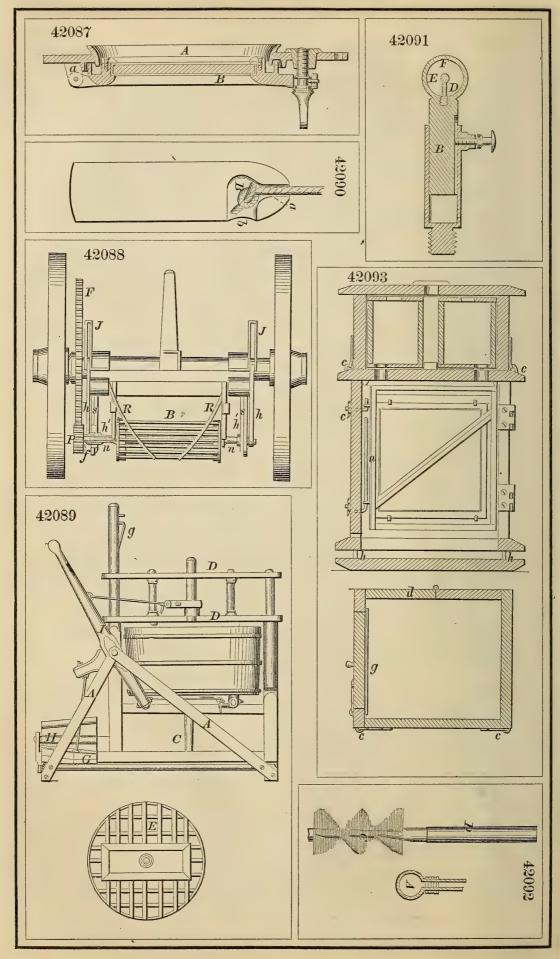


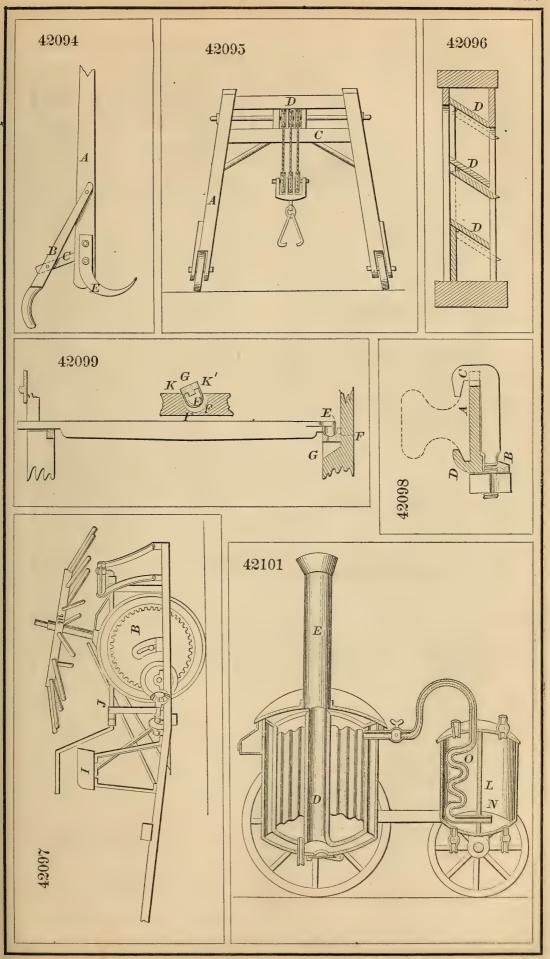


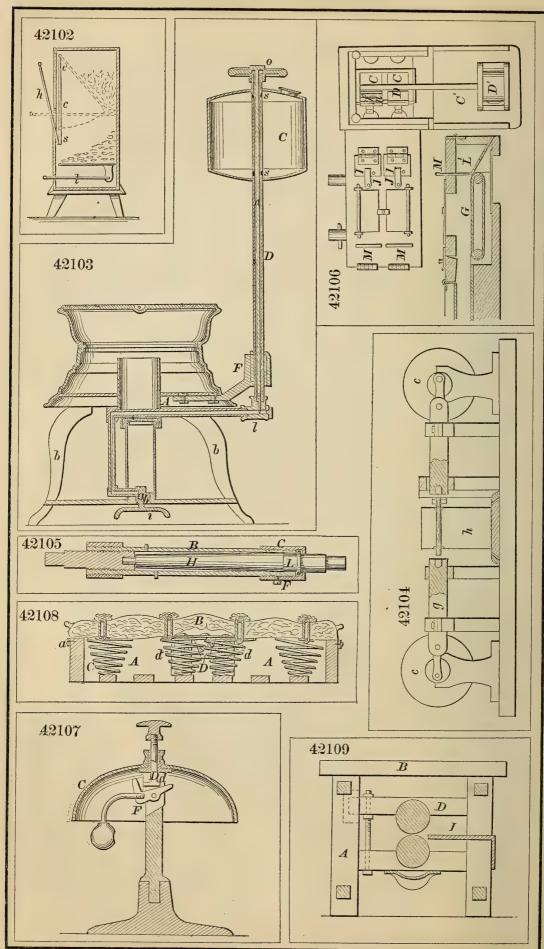


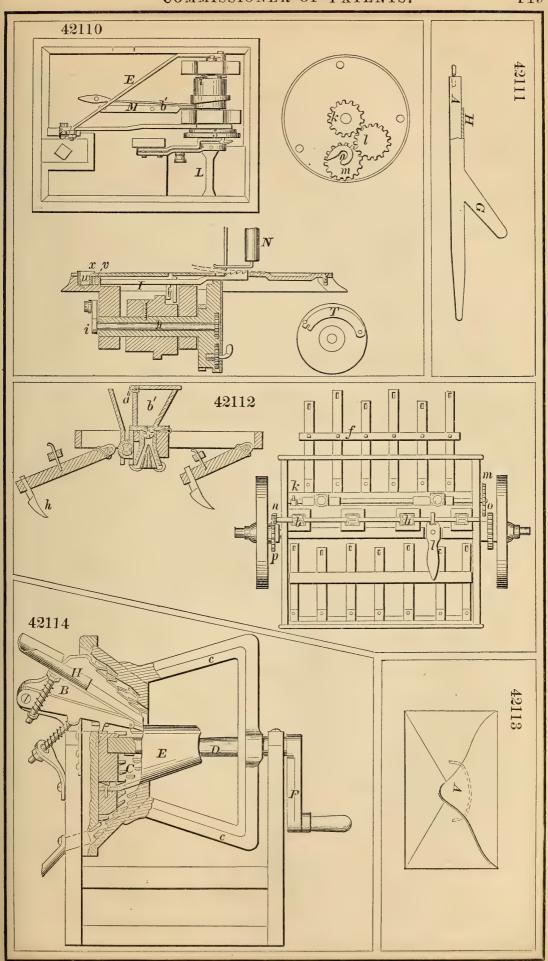


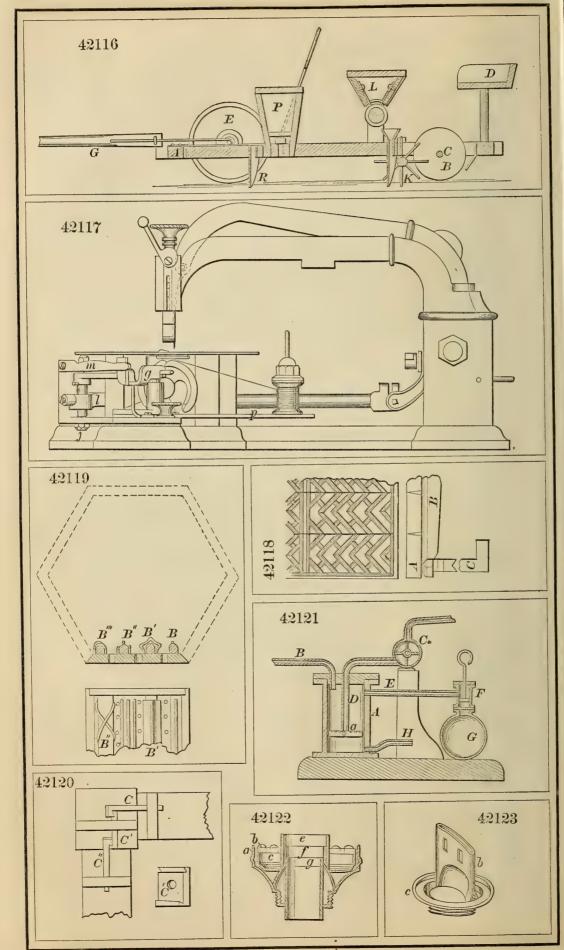


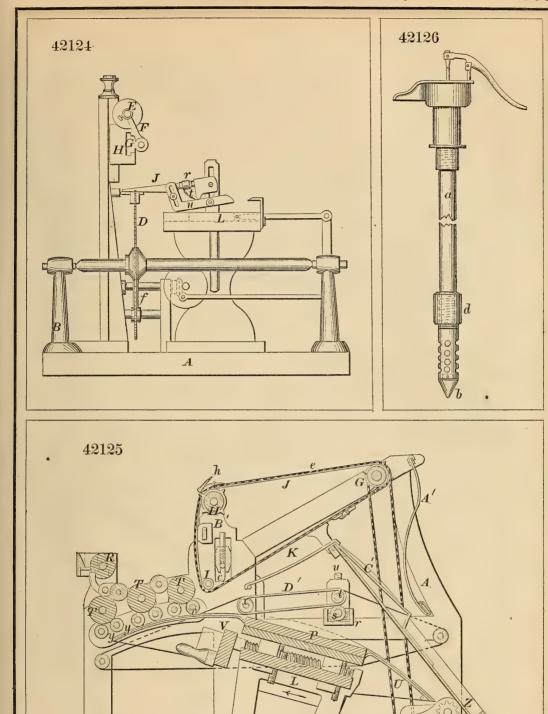












 $\boldsymbol{A}$ 

